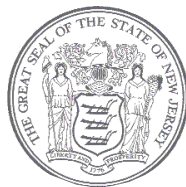


LIMITATIONS IN THE WORKPLACE

A Survey & Study of Atlantic City Casinos

Final Report to the

NJ Casino Control Commission



**Bureau of Economic Research
Rutgers, the State University of New Jersey**

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Preface

In this volume we report on the results of a survey administered to 45,000 employees working at the gaming casinos in Atlantic City. Our purpose was to report on the number and characteristics of persons with disabilities.

Our survey was a pioneering effort; most surveys of persons with disabilities are household surveys where it is difficult to link persons at work with their employers. In this survey we looked at persons with disabilities who were working and, of course, we also knew the industry and firm they worked for.

Our participation response rates were well beyond our expectations. Seventy-eight percent of the 45,000 casino employees participated in the survey and 75 percent of these employees turned in completed survey forms. We could not have achieved such response rates without the active cooperation of casino management and employees. We are also grateful for the help and cooperation of the Casino Control Commission who sponsored the survey and the staff of the Commission who were willing to answer our requests and supply us with information.

We administered the survey on an around-the-clock basis at each of the 12 casinos. To supplement the Rutgers' staff, we were fortunate in securing the cooperation of the Ocean and Atlantic Community Colleges whose students were of invaluable help.

Lastly, our debt to Margaret Polansky must be acknowledged. Through countless drafts and endless revisions, Peg was our mainstay in keeping the project moving. Needless to say, responsibility for any errors or deficiencies that remain rest with the authors.

**Monroe Berkowitz
Paul K. O'Leary
Heather Cammisa**

Summary

More than 8 percent of the employees working at the Atlantic City casinos are disabled. Determining that percentage was the principal objective of this inquiry that involved an in-person survey of more than 78 percent of the 45,000 persons working at the casinos.

More than 78 percent of the 45,000 persons working in the casinos participated in the Rutgers survey.

Under the legislation establishing the gaming industry in the state, the casinos were obligated to provide equal employment opportunities and to take affirmative action to employ women, members of minority groups and persons with disabilities. The casinos regularly reported on the number of women and minority group members, but not on persons with disabilities.

Discovering the number of persons with disabilities working at the casinos turns out to be a bit more complicated than counting the number of women or members of minorities. Observation, even by the most astute, may fail to accomplish the objective. Some employees have medical conditions that are not readily apparent and detailed questioning or even observation of these people may run afoul of the Americans with Disabilities Act. In the interest of preventing discrimination, the Act limits the right of the employer to probe in this area.

The controversy over whether it was feasible to have casinos report on the number of employees with disabilities was the subject of a court case filed by disability advocate groups. The Appellate Division finally ruled that it was possible to conduct such a survey on a confidential basis and ordered the Casino Control Commission to provide the necessary information.

The Commission contracted with the Disability and Health Economics Section of the Rutgers University Bureau of Economic Research to conduct the survey and to report on the number of disabled persons together with information about their demographic and employment characteristics.

In Chapter II, we detail the methodology and processes used in surveying the employees. We interviewed the employees at each casino during their working hours on an around-the-clock schedule using a survey form shown in Appendix A. The interviews were conducted by Rutgers' employees. Once a survey was completed, it was deposited in a locked box in order to assure confidentiality.

In Chapter III, we briefly examine the development of the gaming industry in Atlantic City and the background to the survey. We begin with the legislative obligations of the casinos to assure equal employment opportunities and discuss how the issue of employees with disabilities became involved in the court case that led to the survey.

Chapter IV begins our analysis of the findings. We start with a detailed look at the demographic and other characteristics of all casino employees, whether disabled or not. These are the basic data that underlie the findings in Chapters V and VI that deal with disability. It is here, and in the detailed tables in the appendices, that we present the percentage of employees with disabilities at each casino according to demographic, human capital and EEO categories.

Our charge was not only to survey the employees, but to discuss how the survey results could be kept current. Our suggestions are contained in Chapter VII. We reject the notion that it is feasible to keep results current by tracking exits and hires, and we revisit the issue of why it is not practical to count the number of persons with disabilities by observation. Our suggestion is that an annual sample survey be conducted to update the numbers. We present a

Summary

variety of sampling plans together with recommendations.

Our conclusions are in **Chapter VIII**. Given our definition of disability, the casinos appear to be doing well in discharging their EEO obligations in the area of disability.

We defend strongly our definition of disability, which at its simplest, is the limitation in the ability to perform duties of the job by reason of a medical condition.

Our defense is that this is the normal, usual and routine definition of disability, comparable to that used in most national local surveys.

The comparability of definitions allows us to make comparisons with the number of disabled persons in New Jersey and to estimate the size of the labor pool from which the casinos draw their employees. We present several ways to estimate the size of the labor pool, ***but no matter which estimate is used, the casinos meet the test.***

That finding should not lead to complacency on the part of the casinos or the Casino Control Commission. We are able to use the data to compare one casino with the other.

If all casinos came up to the standard set by the best, the employment of disabled persons at the casinos would increase by 2.7 percent. That would mean 1,233 more jobs for persons with disabilities.

The feasibility of achieving such an increase requires more knowledge than we now have as to the efforts being made by casinos in this area. We now have detailed findings as to the supply side of the equation but little about the demand side. There are differences among casinos, even after we account and standardize for the differences in demographic and other relevant factors. Cataloguing and explaining these differences would materially advance the accomplishment of the EEO objective in the area of disability. We recommend a survey of the casinos' recruitment, hiring and placement practices in this area.

We also recommend a conference to publicize and disseminate the findings of this survey. This is a first effort to survey the employees of an industry to determine disability status. New Jersey should take credit for being pioneers in learning about disability issues and these lessons should be of interest to other gaming centers.

The more one probes into employment and disability, the clearer it becomes that increasing the employment of persons with disabilities poses different issues than in the case of the employment of women or members of minority groups. One can beat the drums enthusiastically for increased employment of women and minorities, but some cautions have to be raised when it comes to advocating more persons with disabilities. We certainly do not want to reach this goal by neglecting safety measures at the work place. In the area of disability, we seek to reduce the incidence of disability even as we seek to increase the number of employees with disabilities. This seeming paradox is resolved once we recognize that good employment policies provide for alternative jobs, transitional employment and other accommodations. Such measures reduce the impact of illness and injury, even as they keep persons with disabilities on the job. Such measures are a natural accompaniment of policies designed to hire more persons with disabilities. ***In spite of these complications, the goal is a simple one: to increase the employment of persons with disabilities in productive jobs in a safe and healthful environment.***

Methodology & Process

Our task was to determine the number and the characteristics of persons with disabilities employed at the casinos in Atlantic City. Counting the number of persons with disabilities had been embroiled in controversy that culminated in a court decision. That controversy and the background of how Rutgers was chosen to conduct a survey are covered in the next chapter. In this chapter we seek to explain the methodology adopted and how we went about conducting the survey.

The survey was preceded by a three-month planning period during which we explored the most cost efficient method of administering a survey among the casino employees.

Activities During Planning Period

The Rutgers survey team met with members of the Casino Control Commission staff to familiarize them with planned activities for the survey and to learn from the Commission staff the type of records kept at the Commission. We were particularly interested in the records as to the number and classification of employees at the casinos.

As a result of these meetings, it was decided that it would be fruitful to begin our activities with an introductory meeting with representatives of the casinos including some CEO's, general counsels and vice-presidents concerned with human resources. Such a meeting was held on July 2, 1997 at the offices of the Casino Control Commission. Each casino was represented by its vice-president in charge of human resources or its EEO director. The meeting was chaired by the Chairman of the Casino Control Commission who took the opportunity to explain the project and to request each of the casinos to extend its cooperation to accomplish the project's objectives.

The Rutgers research team was then introduced and purposes and procedures of the planned survey were discussed. A Rutgers' representative explained a possible survey form that would be used

and the types of information that would be requested of the casino employees. The experience with the form in other industries was discussed. A good deal of time was spent in explaining the safeguards to preserve confidentiality. Assurances were given that results would be disclosed in the aggregate for each casino but in a way that would preclude the identification of any individual.

The Rutgers team then went over the purpose of the three-month planning period during which Rutgers would seek to identify the optimal method of surveying employees in light of how personnel records are kept and a number of other relevant factors. The assembled vice-presidents were also told that the Rutgers team would like to interview the appropriate human resource representatives at each casino to discuss ways to proceed.

During a discussion period, an opportunity was given to ask questions. Several of the questions pertained to the definition of disability that would be used. We explained that the survey form would not ask the employees whether they were disabled or not. Rather, our approach was to ask employees to check off whether they had any of the listed medical conditions. If they checked off that they had a condition, they would then be asked if that condition limited the amount or kind of work they could do at their job or at other jobs for which they were qualified. In order to conform as closely as possible to the Americans with Disabilities Act (ADA) concepts, employees would also be asked if they felt that their employer would consider them to be disabled. The last section of the survey asked those employees with medical conditions whether they utilized any aids or accommodations.

Questions were also asked by participants at the meeting about methods that would be used to assure confidentiality, the time that would be necessary to fill out the survey forms and whether the individual casino would be apprised of the results for their casino. Rutgers' representatives went over the methods that would be used to assure confidentiality and assured the casino representatives that it should take employees less than 10 minutes to fill out one of the questionnaires.

The next step after the general meeting was to arrange meetings with the individual casinos. Such meetings took place during the weeks of July 9 and

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July 16, 1997 and gave the Rutgers group the opportunity to familiarize themselves with persons they would be working with at each casino.

During the meetings we were able to obtain information about how each of the casinos communicated with its employees. We learned about the wide variety of ways that casinos use to keep in touch with their employees and the existing channels of communication that could be used to publicize the survey.

We also asked about what casinos had done in conducting employee surveys. The experience of some of the casinos helped shape our ideas about feasible methods of reaching employees with the least disruption to the operation of the casinos.

In general, these meetings with individual casinos proved to be immensely valuable. They gave us a realistic idea of the tasks at hand and alerted us to some of the problems involved in surveying thousands of employees with wide differences in educational backgrounds, work responsibilities and work schedules that defied easy classification.

We knew that the casinos operated on a twenty-four hour basis, but it took our visits with the individual casinos to bring home the point that many employees worked on a part-time or on-call basis, and, that within distinct shifts, an employee could begin work at almost any hour of the day or night. The bad news was that there were no uniform start or quit hours. The good news was that some casinos had experience in surveying their employees and had worked out methods of reaching all employees over a short space of time.

After meeting with each of the casinos, we next met with representatives of Local 54, the union that represents the food and beverage and service employees. We were able to attend a meeting of the business agents on July 31 where we explained the

project and answered questions of the business agents about the survey. We also took advantage of the union's offer to publicize the forthcoming survey and sent them material for inclusion in their union newsletter.

The Survey Form

The survey form we used is a product both of the surveys we have conducted in other industries and the focus groups conducted among employees at several casinos. We began with the basic form used in prior surveys with some minor modifications.

Three initial focus groups were held with casino employees. These employees represented diverse ethnic and education backgrounds, various departments and EEO job categories. In these groups, employees were given a brief introduction as to the objectives of the survey and then asked to complete the survey form.

Persons in our first focus group proved to be articulate and quite candid about their individual medical conditions. No difficulties were reported in completing the survey and the survey instrument was properly interpreted as designed. The group expressed concern that fellow employees may not accurately report earnings and tips. The group had no problems with the demographics section of the survey, nor did they feel the survey to be too invasive. It was suggested that, in the pre-survey publicity, Rutgers stress the fact that the survey will not hurt anyone and may lead to improvements in the workplace. Minor revisions were made to the form following this focus group.

Another focus group included some managers and supervisors who were helpful in identifying difficulties they felt that their subordinates may have with the survey instrument. The participants did not find the form confusing or overly invasive.

Revisions to the form following this focus group were the addition of medical conditions such as

AIDS and HIV, and the addition of accommodations such as special parking. Also, as a result, Section III of the survey was simplified to ask only whether or not individuals use any of the listed accommodations. Questions pertaining to who provided the accommodations were eliminated.

Another focus group was arranged to include individuals with cognitive problems. These individuals did not find the questions invasive nor did they have concerns providing demographic information. These individuals did have difficulty completing the form independently, and most needed assistance completing the form either due to illiteracy, cognitive difficulties or language problems.

This focus group was very informative. A human resources representative at the meeting indicated that at least 15 percent of the employee population would have similar difficulties. None of these individuals identified themselves as learning disabled, although four of the participants surely met that criteria. One individual responded inconsistently to the limitations section of the survey. Even upon discussion, this individual had difficulty in understanding the questions.

Several revisions to our form were made in response to this focus group. A question on the first page of the form was added to identify those individuals who required assistance completing the form. This was utilized by Rutgers' representatives who assisted individuals as necessary, and based on that interaction, were able to make the determination as to whether help was needed due to a literacy or cognitive difficulty. If the determination was made that a cognitive difficulty was present, that became the defining factor in disability. This approach meets the "perceived as disabled" qualification of disability under the Americans with Disabilities Act.

Another revision to the form following this meeting was the addition of instruction columns in Section II. Another minor adjustment to the form was to add an option to indicate either yearly salary or hourly wage in the demographics section of the survey, as some participants only knew their hourly wage and were unable to identify a yearly salary figure.

Given these changes, we had the form designed by the NCS Company who designs machine-readable forms for Rutgers University.

As can be seen on this form, the questions to be asked can be divided into three sections. First, we asked for certain basic job and demographic information. The demographic data presented few problems in our pre-tests. However, if we wanted results according to EEO job category, it became evident that many (most) employees did not know in which EEO category their job fell.

It was decided that the solution to this problem was to have the Rutgers' representative fill in this information before the person was handed the form. This procedure is described more fully below.

The second set of questions are the heart of the survey since they define who is and who is not disabled. In setting this list, we reviewed the questions asked on each of the national and state surveys which have been done to determine the number of persons with disabilities in the nation. These surveys include the Social Security surveys done in 1966, 1972 and 1978, the National Health Interview Survey, the Survey of Income Programs and Participation, the Current Population Survey and the questions asked in the decennial Census. This information was supplemented by our review of surveys that have been done in the States of California, Texas and New Jersey.

We were conscious of the limitation of time and sought a method of asking the questions that would require each employee to check off their answer. In our survey form, the employee is not required to do any writing. Their only obligation is to fill in a space so that their answers can be machine-scored.

In the first set of disability questions, the employees are asked to check if they have any of the listed medical conditions. Space is provided for them to fill in any condition which is not listed, and, of course, that would require them to write in the name of the condition.

If the employee responds negatively to each of the conditions, the survey ends there and the employee is instructed to turn in the form. If employees check "yes" to any one of the conditions, they are then asked for each condition, if that condition limits the

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amount or kind of work they can do at their job. If the answer is “yes,” that employee would be considered disabled. Such a concept of disability would be in keeping with national survey definitions. If they answered “no” for a condition which they checked, they would then be asked the next question, whether that condition limits the amount or kind of work they could do **at other jobs** for which they are qualified. If they answer “yes” to that question, they could also be considered to be disabled.

In the third question, employees are asked if they believe their employer would consider them to be disabled. The purpose in asking that third question is to conform to the concepts contained in the Americans with Disabilities Act. Disabled persons under the ADA would be those persons who believe that their medical condition limits the amount or kind of work they can do at their current job, or at any other job for which they are qualified or if they have a condition that might be considered disabling. Having such information will allow us to make the comparisons with survey data as indicated below.

For those employees who check “yes” to any of the medical conditions, we go on and ask them if they use any of the listed Aids or Accommodations. We have experimented with the ordering of these questions and have decided to feature changes in work schedules as an accommodation. In our initial testing, we found some confusion as some persons interpreted the question about accommodations as being limited to wheelchairs and ergonomic adaptations of the workplace.

In our testing, we determined that it took no more than a few minutes for most employees to fill out the answers to the questions. However, we also identified, in our pretests, employees with problems.

Problem Areas

Employees with problems filling out the questionnaire were divided into three categories although there are overlaps among these groups.

First were the employees who are not proficient in the English language. To help solve this problem we translated the survey form into Spanish and had a Spanish-speaking Rutgers’ representative

on hand during much of the survey process. We also provided translations of the survey in simple Chinese, Hindi and French. However, there are other employees who are more comfortable in their mother tongues. We could not possibly have Rutgers’ representatives fluent in each of these other languages at the casinos when these people appear to answer the questionnaire. Yet we recognize that these persons would have difficulty in understanding the English questions.

Our solution was to have such employees bring along a co-worker who could interpret for them. We stressed, in our pre-survey publicity, that any employee with difficulty in understanding the questions in English or in Spanish was free to bring along a co-worker to interpret for them. The interpreter could not be from the managerial ranks. This precaution was intended to avoid even the appearance of a breach of confidentiality.

The casinos have ongoing experience with such employees and we adopted the same solutions of Another group of employees with difficulties were those employees with literacy problems. having someone help them in answering the questions. The difference here is that we were able to use Rutgers’ representatives to explain the questions to them so that there was no need for these persons to bring along a fellow-worker.

The third group of persons with difficulties would be those employees with cognitive problems. Given our experience at the focus groups, our solution was to have Rutgers’ representatives aid and assist such employees. At each of the planned sessions, we had Rutgers’ representatives who had been trained to deal with persons with intellectual handicaps.

As indicated above, at the bottom of the form we ask if the person has had help in filling out the form. If the answer is “yes,” we then have either the person, or the person helping the employee, check off the reason for the help. Those reasons would be: difficulty in understanding English, difficulty in reading or difficulty in understanding. Having this information about who extended help, and for what reasons, allowed us to identify persons with cognitive problems.

The Administration Plan

We had a strong preference for administration of the survey in person rather than by mail or by telephone, but there were still the issues of how best to accomplish this. Answers to some of our problems came after our conversations with personnel from Harrah's who had experience in administering a yearly survey to their employees. From Harrah's, we learned that it was entirely feasible to designate a central location in the casino and have employees come to that place during their working hours. At Harrah's, casino management took the responsibility for getting employees to the survey location and seeing to it that they had the time to complete the survey.

It was decided that the administration of the survey would take place over a one to two week period of each casino's choice. They would select the dates and provide a meeting room for the survey's administration. We followed the Harrah's method and requested that each casino management take the responsibility of arranging for their employees to go to the survey location.

The casinos did not have any problem with the concept, but there were substantial differences in the way they accomplished this task. Our interest in administering the survey was that there be a steady stream of persons coming to the survey room so as to make the best use of our employees. We recognized that it would be a difficult task to identify and coordinate the times when employees would be relieved from their regular duties to take the survey. We felt that such problems were handled best by the casino management.

Each casino would also provide Rutgers' staff with a roster of their employees to track participation. The roster was also to include EEO job categories so that such information could be included in the survey data. Employees would be sent on company time to the designated room staffed by Rutgers' personnel. Once at the room, employees would have their name checked off, thus indicating they had been given the opportunity to participate in the survey. Their EEO

code, identified through this check-in procedure, was noted on the survey each employee was given to complete. They were then given some brief background and instructions on the survey and provided a private area to complete the form. Once the survey was completed, it was dropped into a Rutgers collection box and the employees returned to their jobs. On the average, the complete process took less than ten minutes.

To make this process successful, we needed cooperation at each level of the casino organization. We needed the executive staff at each casino to put the plan into place, the managers and supervisors to implement the plan and the employees to provide candid responses. The administration methodology thus consisted of four basic elements. These were the casino specific logistical planning, the pre-survey publicity, recruiting staff and finally the actual survey administration.

Casino-Specific Logistical Planning

The first stage of the administration process consisted of communication with the human resource or EEO/AA department contact within each casino to set the dates for the survey's administration and to develop the specifics of the logistical plan. Since it was felt that the individual casinos would know the best and most efficient means of getting their employees to the survey administration site, the logistics of that process were left to the casinos. We did, however, provide assistance and suggestions as appropriate. Each casino was asked to select dates for the survey in which they would be able to provide the survey facilities and get all of their employees to the survey site. They were told that they could schedule up to 72 hours over a 14-day period in any combination of shifts they liked. To assist them they were given a scheduling grid in which they were asked to block out the periods they wished to utilize. They were also asked to estimate employee participation rates for the various hours of the schedule to assist us in determining staffing requirements.

The process of finalizing the administration schedule for each casino took place over a number of weeks during the months of September and October, and included a good deal of consultation between our staff and the casino to determine the best schedule design in each case. There was a great deal of variety

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in the schedules selected. Some casinos chose long blocks of hours over few days while others chose shorter blocks over more days. The shortest administration period was three days, and the longest was eight. In each case, the casino utilized the full complement of 72 hours offered and covered all hours of casino operation to capture the various employee shifts. In special cases, we also allowed casinos to schedule more than the standard 72 hours if it appeared that the standard period would be insufficient.

Pre-Survey Publicity

Once the administration dates had been selected, the Rutgers team moved into the second stage of the administration process and proceeded to provide publicity and informational support to the general management at each casino to get them “on board” with the project. In each case we began gearing up for a casino two to four weeks before the survey administration was to begin. We asked to meet first with the upper level executives to explain the process, answer questions and solidify support. We then requested a meeting with middle managers and line supervisors about two weeks before we were set to begin, again to explain the process, answer questions and solidify support.

In addition to this publicity campaign targeted to casino management, a media blitz was also launched to inform rank and file employees. Each casino was provided brochures during this period that provided detailed answers to relevant questions about the survey:

- ◆ ***Who is conducting the survey?***
- ◆ ***Who will participate in the survey?***
- ◆ ***Is the survey confidential?***
- ◆ ***Why is this survey being conducted?***
- ◆ ***Who will administer the survey?***
- ◆ ***When will the survey be given?***
- ◆ ***What is the survey like?***
- ◆ ***Why is this information needed?***
- ◆ ***Why did Rutgers design the survey?***

The way in which these brochures were utilized varied among the casinos. As one of the larger casinos and the second casino to participate, Tropicana was intent to assure that employee participation would be complete. In support, George Wackenheim and his staff suggested that the brochure be given out to all employees as an attachment to employee paychecks. We thus supplied Tropicana with more than 5,500 copies of the brochure for this purpose with very positive results. This methodology was suggested for each of the remaining casinos, but only Claridge and Resorts decided to take this extra step in support of the project. For the other casinos, the brochures were made available to employees in Human Resource/EEO offices and in employee areas of the casino.

The brochure questions and their answers were also formatted into full page “hot sheets” to be posted throughout the casino, as were full-size posters with similar basic information about the survey. In each case, the information was provided in both English and Spanish. Each casino was provided copies of the survey (in English and Spanish) to post throughout the casino. They were also given press releases as well as filler materials to be incorporated into their company newsletter and for display on internal communications channels. These materials for casino employees were also supplemented by articles in the local press and the Local 54 Union newspaper.

The basic message behind each of these components of the campaign was that a confidential Rutgers survey was coming whose purpose was to help the casinos evaluate the effectiveness of their hiring and retention practices with respect to people with disabilities. We also attempted to reduce apprehension about the survey. The confidentiality of the survey was emphasized and workers were told that there was nothing to fear from participation.

Recruiting Staff

At the outset, we recognized the need for recruiting staff to administer the survey. We sought

out persons with no connection with the casinos who could be trained to understand the survey and its method of administration. These individuals had to be available at all hours since the survey was to be administered on an around-the-clock basis. We were fortunate to find such persons among the student bodies at Ocean and Atlantic Community Colleges. We also looked into the use of temporary agencies, but found that their structure would not fit well with the necessary flexibility we would require from our staff. We interviewed more than 25 persons and 15 were selected to help administer the survey. Each of these persons were given a short training course where we explained the nature and purpose of the survey and the method of administration.

We owe a debt of gratitude to each of the persons who served as members of the survey team. They proved to be adaptable and were able to accommodate to the varying conditions encountered at the different casinos. Of these persons, we want to single out Marvis Rolle, Jaya Masand, Daniel McMasters and Laura Kerly who were able to devote a good bit of time to these tasks. They proved to be reliable and efficient employees and we are happy to acknowledge their contributions to the success of the survey effort.

Survey Administration

The final stage of the survey administration at each casino was conducting the actual survey with casino employees. In each case we met in advance of the survey start with the casino survey representative to review the survey facilities and arrangements. Meeting rooms were to be away from employee lounge areas to provide adequate privacy for participants. At the same time, the room needed to be as convenient as possible so as to facilitate maximum participation with a minimum of inconvenience.

Depending on the employee population of the casino, room capacities ranged from 25 to 60, arranged in classroom style to provide a confidential working atmosphere. In general, a casino representative was present when the survey administration began to provide the employee roster and verify that the facilities

were adequate. Two Rutgers posters were placed on easels at the entrance to the survey room to verify the independent nature of the survey and reiterate its basic ideas. A third poster was also erected that provided smaller page-sized translations of the larger English posters in Spanish, Hindi, and Chinese. A fourth smaller poster provided this same information in French.

Two tables for Rutgers personnel were placed either just outside or just inside the survey room, depending on the physical layout and capacity of the room. The first table was used to check employees in and cross off their names as having been given an opportunity to participate. At this point, each employee was given a slip indicating their EEO category as shown in the roster. The employee was then asked to step to a second table to receive a survey form and instructions for completing it. Once there, the employee was given a survey form in English or Spanish after the proper EEO category was transferred from their check-in slip. Translations of the survey were offered as needed to employees whose native tongue was French, Hindi, or Chinese. At this point, verbal instruction and background information was given to supplement the written instructions provided on the survey.

Though the configuration varied according to scheduling priorities and need, the general administration set-up consisted of two Rutgers' employees to check in casino employees and a third to explain and pass out the survey. While in most cases the survey was staffed with a minimum of three persons, at slow times and in off-hours, we were able to get along with two. At peak periods at the larger casinos, we staffed with as many as five employees.

One of our Rutgers staff was fluent in Spanish and two were fluent in Hindi. A third member was competent in French, though this turned out to be of minor importance. The oral presentation was given in those languages when possible, and attempts were made to coordinate with supervisors to bring down Spanish, Hindi and French speaking employees when Rutgers' personnel with the needed language skills were present. In many cases employees arrived with "buddies" who were co-workers who could assist them in completing the survey. This was permitted so long as the "buddy" was not a supervisor. While supervisors were told that they could not help employees complete the survey, they were permitted

to explain the survey in advance of its completion.

Rutgers' personnel also assisted individuals who were illiterate, those with intellectual impairments, and those who could speak English but needed extra assistance understanding the survey. Early in the process, it was discovered that a fair number of casino workers were having trouble completing the survey because they had failed to bring their reading glasses to the survey room. At first this was dealt with by allowing the employee to return with their glasses, or having a Rutgers' employee assist them in completing the survey. This problem was soon rectified with the purchase of a pair of generic reading glasses that were available to anyone who needed them.

Once employees were finished with their surveys, they were instructed to deposit them in the Rutgers drop box on their way out of the survey room. Employees who did not wish to participate in the survey were asked to deposit their blank surveys in the drop box. Since these surveys would at a minimum have the EEO category, this process would allow us to determine the number of employees who checked in and then did not complete the survey, as well as the distribution of EEO categories for this group. The number of non-participants at this point in the survey process was very small (see below).

Each survey included a pre-printed machine-readable survey number in running sequence allowing us to track administration and review questionable surveys after the information had been scanned into a data set. At the initiation of the survey process for each casino, the beginning survey number for the English and Spanish forms was noted and recorded so that a running count of completed surveys could be maintained. The total employee population was also noted and the target 80 percent completion figure calculated. In this way we were able to track survey participation results in relation to the target at each point in process and provide feedback to casino management as to the relative progress. The casino representative generally maintained close contact with the Rutgers' staff to monitor needs, and to induce supervisors to get their employees to the survey site.

In order to assist casinos in monitoring participation, Tropicana and Claridge provided "participation slips" for the survey staff to give to casino employees when they checked in. The employee

would then write their name on the slip and return it to their supervisor. By collecting and reviewing these slips, each supervisor was able to determine precisely which employees had been to the survey site, and which had not. In keeping with the voluntary nature of the survey, employees were given this participation slip once they had checked in with the survey staff, regardless of whether they completed a survey or not. This process was suggested by George Wackenheim of Tropicana, and proved a useful tool for casinos in tracking the participation of employees. While this formal system was not utilized at the other casinos, employees were told to keep our standard EEO slip to give to their supervisor to assist supervisors in determining who had participated in the survey. None of the arrangements interfered with the confidential nature of the survey since there was no way to connect any individual response with a particular employee.

Participation and Response Rate

Since this survey was intended to be a disability census of the Atlantic City casino population, the target population was all full-time, part-time and on-call employees who worked during each casino's survey administration period. Regular employees who were on leave or casual employees who were not scheduled to work during the survey period had no means of participating, and were, therefore, not included as part of the employee population.

The administration schedule is shown in Figure 2.1. As this figure shows, only one casino Harrah's, was surveyed in October 1997 and no surveys were conducted in November. The schedule picks up in December, where three casinos, Tropicana, Showboat and Caesars, were surveyed prior to the beginning of the Christmas/New Year holiday. Things got much busier in January and February as we entered the prime period of the survey administration process. January began with a make-up session at Caesars, followed by surveys at Sands, Trump Plaza, Trump Marina, Claridge and Bally's Park Place in quick succession. February picked up where January left off, with the conclusion of Bally's Park Place, followed immediately by Hilton, Resorts, and

Taj Mahal. The month ended with make-up sessions at Showboat and Trump Marina, with a final make up session carrying over into the beginning of March for Trump Plaza. The only administration overlap occurred between Tropicana and Showboat, on one hand, and Bally's and Hilton on the other.

As shown in Figure 2.1, there was a great deal of variety in the schedules selected by the casinos. Some, such as Caesars and Claridge chose 24-hour continuous operations, while Tropicana's sessions varied round-the-clock. Others, such as Showboat, Bally's, Hilton and Resorts, chose to have the survey administered over a greater number of days with differing schedules. The remaining Trump casinos utilized 18-hour days to reach their employee population.

Survey Participation and Response

All employees working during the survey administration period for each casino were given the opportunity to participate in the survey. Employees who were given the opportunity to participate, but who did not wish to complete a survey, were given a survey with their EEO code identified and asked to deposit the form, uncompleted, in the collection box. Our goal at each casino was that at least 80 percent of employees would be given the opportunity to participate.

The total casino employee population is a dynamic figure. The population at each casino was determined specifically for the time frame in which the survey was being administered.

Given this, the relevant casino population was 45,163 employees for the survey period. To this population we administered a total of 35,398 surveys at the 12 casinos over the five-month administration period.

Some of these surveys, however, were incomplete or were completed incorrectly. As a result, the number of useable surveys had to be determined through a data cleaning process before the appropriate response rate could be calculated.

During the data cleaning process, a total of 1,502 surveys were determined to be unusable. The first step in determining the usability of survey responses was to check for the consistency of the responses within each survey. To accomplish this, we established outlier limits for relationships between responses and then examined the responses of surveys with responses that fell beyond the outlier limit. For example, the respondents' ages were compared with their level of education. If an individual's age was under 21 and their completed level of education was a Bachelors degree or higher, or their age was under 25 and their completed level of education was a doctorate degree, their entire survey data was examined for consistency. If, upon further examination, the response was clearly out of line, the suspicious response was either set to missing, or the entire survey was thrown out. However, such changes were made only if there was compelling evidence of errors. Otherwise, the questionable response was retained.

In some cases it was apparent that only the inconsistent field was problematic, and these responses were reset to missing values. On a number of surveys, for example, it was obvious from review of the entire survey (especially age, department, EEO code and income) that individuals who were *currently* in BA programs had indicated that they completed such programs. In these cases the "completed education" response was set to missing while all of the other information was retained intact. Such individual responses were reset for only 117 individuals.

In other cases, consistency checks revealed surveys with numerous responses that were nonsensical. In these cases it was either apparent that the respondent was thoroughly confused by the survey, or was intentionally providing inaccurate information. In such cases the entire survey was removed from the data so as not to contaminate the results. In all, however, only 39 surveys were discarded due to inconsistent responses (see Table 2.1).

There were also a number of surveys that were only partially completed. Because the consistency of

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the responses for such surveys could not be reasonably verified, they were excluded from the analysis. Upon review of the data, it was determined that surveys with more than three missing responses from either the demographic or medical conditions sections would not be included in the data.

In all, a total of 1,463 surveys were excluded from the analysis for being incomplete. As indicated in Table 2.1, this total included 521 surveys with more than three missing responses to the demographic section of the survey, 596 surveys with missing responses to the medical conditions section of the survey, and 346 surveys with more than three missing responses to both the demographic and medical conditions sections.

In most cases, the surveys in question had missing information for all or nearly all of the fields in the section involved. For the missing demographic section, 57 percent have 13 or more missing responses for the 14 fields while for the medical conditions section, 71 percent have missing responses to all 25 fields. These incomplete surveys include those individuals who simply missed completing sections as well as those who did not want to fill out one or both of the survey sections.

Combining the surveys removed for inconsistent response with those removed for too many missing fields, we have 1,502 surveys that, though turned in by employees listed as participating in the survey, were not included in the data analysis. This figure represents only 4.2 percent of the total surveys received.

Table 2.2 breaks down the surveys received for each casino by English and Spanish versions, and by usability. We see that the Spanish versions completed average about 8.5 percent for each casino. Comparing the surveys received at each casino with the known employee population at the time the survey was administered, we see that the participation rate averaged 78 percent, very close to our 80 percent goal. This participation rate was highest for Harrah's at 84 percent, and lowest for Resorts at 67 percent. Though the participation rate was low for Trump Casino Services, it is believed that the actual participation figure for this unit is actually higher, but that their surveys were mistakenly included in their respective casino locations, rather than in the Trump Casino Services sub-unit.¹

Of the 35,398 surveys received, the usability rate after the inconsistent and incomplete surveys are removed, averaged 96 percent. The lowest usability rate was for Trump Casino Services at 89 percent, and the highest rates were for Caesars and Tropicana, each with rates in excess of 97 percent. Combining these participation and usability rates we attain our response rate which averages 75.1 across all of the casinos. This figure represents the rate of usable surveys from the total casino population at the time our survey was administered.

Conclusions

We attribute the high participation and response rates to the cooperation of the casinos' management and employees. Everyone cooperated in spreading the word about the purpose of the survey and the confidential nature of the survey and reporting of results. We present the results in detail in Chapters IV - VI, but first we briefly examine aspects of the casino industry in the period leading up to the survey and the relevant changes that occurred during the survey administration process.

¹While required to hold a casino license, Trump Casino Services (TCS) is not an operating casino hotel. It provides support services to the three Trump operating properties - Marina, Plaza, and Taj Mahal. The support services centralized in TCS are human resources, MIS, finance, audit and purchasing. Since it is not an operating casino hotel, the size of its workforce is much smaller and the employees have different characteristics, as compared to the employees of the average casino (see Table 2.2).

Chapter II

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Figure 2.1
1997-98 Casino Disability Survey
Administration Schedule

October						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9 Harrah's 8am-midnight	10 Harrah's 8 am-midnight	11 Harrah's 8 am-midnight
12 Harrah's 8 am-midnight	13 Harrah's 8 am-midnight	14 Harrah's 6am-4pm	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
December						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 Tropicana 3am-midnight	3 Tropicana 3am-midnight	4	5	6
7	8 Tropicana 3am-midnight	9 Tropicana 9am-5pm Showboat 6am-6pm	10 Showboat Noon-10pm	11 Showboat 5pm-2am	12 Showboat 6am-6pm	13 Showboat Noon-10pm
14 Showboat 5pm-2am	15 Caesars 10-am-midnight	16 Caesars 24 Hours	17 Caesars 24 Hours	18	19 Caesars 6am-8pm	20
21	22	23	24	25	26	27
28	29	30	31			
January						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6 Caesars Make-up 6am-midnight	7	8 Sands 3pm-1am	9 Sands 7am-midnight	10 Sands 6am-2am
11 Sands 7am-midnight	12	13 Trump Plaza 6am-midnight	14	15 Trump Plaza 6am-midnight	16 Trump Plaza 6am-midnight	17 Trump Plaza 6am-midnight
18	19	20 Trump Marina 6am-midnight	21 Claridge 24 Hours	22 Trump Marina 6am-midnight	23 Trump Marina 6am-midnight	24 Trump Marina 6am-midnight
25 Claridge 24 Hours	26 Claridge 24 Hours	27 Bally's 8am-6pm	28 Bally's 7am-midnight	29 Bally's 8am-10pm	30 Bally's 7am-midnight	31 Bally's 8am-10pm
February						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Bally's 7am-5pm	3 Bally's Noon-10pm Hilton 8am-6pm	4 Hilton 7am-midnight	5 Hilton 8am-10pm	6 Hilton 7am-midnight	7 Hilton 8am-6pm
8	9 Resorts 10am-8pm	10 Resorts 4pm-midnight	11 Resorts Noon-midnight	12 Resorts 10pm-9am	13 Resorts Noon-3am	14 Resorts Noon-midnight
15 Resorts Noon-9pm	16	17 Taj Mahal 6am-midnight	18	19 Taj Mahal 6am-midnight	20 Taj Mahal 6am-midnight	21 Taj Mahal 6am-midnight
22	23	24 Showboat Make-up 8am-8pm	25 Showboat Make-up 8am-8pm	26	27 Trump Marina Make-up 8am-8pm	28 Trump Marina Make-up Noon-1am
March						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6 Trump Plaza Make-up 8am-7pm	7 Trump Plaza Make-up Noon-9pm
		10				
8	9	17	11	12	13	14
15	16	24	18	19	20	21
22	23	31	25	26	27	28
29	30					

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Table 2.1
SURVEY USABILITY

Total Surveys Received	35,398
Surveys removed for data inconsistencies	39
Surveys removed for more than 3 missing demographic responses	521
Surveys removed for more than 3 missing medical conditions responses	596
Surveys removed for more than 3 missing responses from both the demographic and medical conditions sections of the survey	346
Total Unusable Surveys	1,502
Total Usable Surveys	33,896

Table 2.2
SURVEY PARTICIPATION

Casino	Completed Surveys		Total	Total Employees	Participation Rate	Usable Surveys	Usability Rate	Response Rate
	Spanish	English						
Harrah's	240	2,758	2,998	3,587	83.60%	2,792	93.10%	77.80%
Tropicana	286	3,332	3,618	4,737	76.40%	3,509	97.00%	74.10%
Showboat	240	2,317	2,557	3,244	78.80%	2,442	95.50%	75.30%
Caesars	264	2,832	3,096	3,786	81.80%	3,009	97.20%	79.50%
Sands	172	1,862	2,034	2,790	72.90%	1,921	94.40%	68.90%
Plaza	349	2,965	3,314	4,191	79.10%	3,180	96.00%	75.90%
Marina	231	2,268	2,499	3,081	81.10%	2,407	96.30%	78.10%
Claridge	120	1,735	1,855	2,326	79.80%	1,777	95.80%	76.40%
Bally's	318	3,978	4,296	5,480	78.40%	4,111	95.70%	75.00%
Hilton	276	2,488	2,764	3,428	80.60%	2,638	95.40%	77.00%
Resorts	156	2,187	2,343	3,493	67.10%	2,260	96.50%	64.70%
Taj Mahal	299	3,515	3,814	4,693	81.30%	3,664	96.10%	78.10%
Trump TCS	0	210	210	327	64.20%	186	88.60%	56.90%
TOTAL	2,951	32,447	35,398	45,163	78.40%	33,896	95.80%	75.10%

The Casino Industry

In this chapter, we set forth the background to the survey, how and why it came about. This background necessarily involves us in the controversies that have arisen about Commission regulations and in the decision of the Appeals Court that prompted the Commission to contract with Rutgers University to do this survey. Unlike the other chapters in this report, this one is not addressed specifically to the Casino Control Commission since they are thoroughly familiar with the background, with the changes in their rules and regulations over time, and with the court case. We include it here as necessary background for the reader who may be curious about the objectives of the survey and why it was undertaken at the time that it was.

The court case that ordered the Commission to gather necessary statistical data on the number of persons with disabilities employed in the casino industry in Atlantic City is the end of the story. To understand it, we review briefly the history of the industry in Atlantic City and the special obligations it has to employ persons with disabilities.

Background

The casino industry was created in 1977 when the legislature authorized gaming in Atlantic City, a hitherto prohibited activity. Its beginnings were hesitant with the state exercising a heavy controlling hand as evidenced by the detailed rules and regulations that governed the casino activity. At the outset, the Casino Control Commission licensed all employees and controlled all aspects of the casino operations including the hospitality aspects of the business. As an example, in addition to regulating actual gaming operations, the Commission approved the mix of restaurants, meeting and entertainment space in the hotel portion of the casino hotel facility. Gaming operations were even more tightly controlled. The original Casino Control Act was so pervasive that it even established the minimum number of square feet that had to be allocated to each type of gaming table in a casino room.

The degree of control exercised by the Commission changed over time. While still concerned with assuring that the casinos operated with integrity, over the years the trend was toward deregulation. The legislature amended the laws governing the operations of the casinos by allowing both the casino industry and the Commission increased discretion, especially in the non-gaming aspects of casino hotel operations.

Today, in contrast to the situation when the casinos began, casino licensees are free to develop or modify their hotel amenities as they see fit. Casino licensees also have increased flexibility as to the types of games that are offered and their arrangement within a casino room. Since 1991, casino gaming is permitted on a 24-hour a day basis. The liberalizing trend continued under the influence of various statutory amendments enacted each year from 1991 through 1995.

The industry has proven to be an attractive one for investors with new casinos coming into play and changes in existing casinos' ownership. After passage of the enabling legislation in 1977, Resorts was the first casino to open in May 1978. Two more casinos began operation in the following year, Bally's Park Place and Caesars. By the end of 1981, nine casinos were operating and today 12 casinos are in operation and three more are on the horizon.

The changes continue apace. During the course of our survey, it was announced that Harrah's would be buying out Showboat in December 1997 and that the operations of the two companies would be combined within the year. Sands declared bankruptcy on January 5, 1998, three days before we began surveying its employees. Caesars, which was owned by the ITT Corporation, was bought by Starwood in the Fall of 1997. We owe a debt of thanks to the human resource managers who were able to concentrate their attention on the survey even as these changes were taking place.

Events Leading to the Contract for the Survey

The contract to Rutgers University to undertake the survey came after the Appellate Division of the Superior Court issued its decision in the Matter of

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The Repeal of the N.J.A.C. 19:53, 282 N.J. Super. 217 (App. Div. 1995). The law establishing the casinos provided for equal employment opportunities for women, members of minority groups and persons with disabilities, among others. The Commission adopted regulations in compliance with the law and required individual casinos to report on the number of employees and their EEO classifications in the case of women and minority groups. Although no specific regulations required reporting the number of persons with disabilities, some casinos, as far back as 1987, did submit such reports in response to an informal request from the Commission's staff.

Casinos had few difficulties reporting the number of women and members of minority groups, but some familiar problems were encountered in reporting on the number of persons with disabilities (sometimes referred to as persons with handicaps, or simply handicapped employees). When it became apparent that the disability employment numbers reported by casinos were questionable, the casinos were informed by the Commission that they no longer needed to report these figures for persons with disabilities. In spite of these instructions some casinos continued to do so, and it was from these voluntary reports by only a few casinos that the remarkably persistent number suggesting that a total of 165 employees with disabilities were employed in the Atlantic City casino industry emerged.

In 1993, the Commission decided to revise its regulations in this area. The new regulations required casino licensees to engage in affirmative equal employment opportunity efforts for the benefit of all persons protected by the Act. But the revised rules only imposed affirmative employment obligations for the benefit of women and members of minority groups, and eliminated such obligations for all other protected persons, including persons with disabilities.

In reaction to the new regulations, the Commission was sued by three advocacy groups. The complaint protested the lack of equal employment and affirmative action requirements for, as the court refers to the group, "the handicapped." The appellants challenged "the under-inclusiveness of the current regulations as they apply, or more to the point, do not apply to the handicapped."

The Court concluded in May 1995 that, "the removal of the handicapped from the scope of the

Commission's previous, rather inclusive, equal employment opportunity and affirmative action requirements was arbitrary, unreasonable and without sufficient basis." The Court remanded to the Commission for the promulgation of new regulations and directed it "to take whatever steps it deems necessary to obtain and compile whatever necessary statistical data it needs to determine what is required for the promulgation of such regulations."

The Commission responded to the Court decision by promulgating regulatory amendments in January 1996 that imposed affirmative action employment requirements for persons with disabilities that were essentially identical, save for employment goals, to those requirements that the new rules had provided for women and minorities. These actions were undertaken immediately since statistical data was not needed to impose what the Court had concluded were statutorily imposed affirmative employment obligations. The Commission recognized, however, that such data, if it could be collected, would be needed in determining whether further discretionary enforcement measures, such as employment goals, would be appropriate.

Although the Court did not expressly require the Commission to conduct a survey of casino licensees, the Court did speak, as noted above, of gathering statistical data. At a hearing before the Commission (May 5, 1993) a representative of the Rutgers University Bureau of Economic Research had proposed a survey of the casino employees and maintained that it could be done without violating confidentiality. The Commission staff endorsed the idea of a survey but noted that the Commission's Advisory Board on Persons with Disabilities had concluded that a survey was not necessary. The Advisory Board felt that a more fruitful approach to increasing the representation of disabled employees would be through cooperative efforts between casinos and local organizations that refer disabled applicants.

The result was a stalemate for about 18 months with the Advisory Board making no recommendations about a baseline survey. The issue was whether any type of survey was necessary to comply with the Court decision, or whether the Commission should

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instead hire a consultant to study ways to increase the employment of persons with disabilities at the Casinos.

In May 1996, the staff held further meetings with the Bureau of Economic Research representatives after which the Bureau submitted a proposal to the Commission to conduct a survey of the casinos. The proposal incorporated a three-month planning period during which the Bureau would interview casino representatives and plan the best methods of conducting the survey.

The Advisory Board recommended an alternate proposal submitted by Rowan College. The Rowan College proposal had two options. Under the first of these options, an attempt would be made to identify disabled persons by means other than self-disclosure. These would include such means as identifying and tracking local feeder agencies, insurance providers, substance abuse programs and workers' compensation claims. A second option would involve a survey of all casino employees using self-disclosure techniques.

At a public meeting held on September 11, 1996, the Commission voted to approve the Rutgers proposal. A contract was drawn up and signed providing for the three-month planning period and for the conduct of the survey at the casinos.

As set forth in detail in Chapter II, during the planning period Rutgers personnel met with casino representatives and agreed on the methods of surveying casino employees. Subsequently, each of the casinos was surveyed with response and participation rates that more than met expectations.

Casino Employee Demographics

Before we analyze the proportion of the labor force that is disabled, we take a broader look at all employees and their demographic characteristics. In this chapter, our focus is thus on all employees working at the casinos, not just on the employees with disabilities. In the next chapter we report on our disability results and the prevalence of disability at the casinos, according to various demographic characteristics. In Chapter VI we will examine the variation of disability employment by casino. This chapter thus lays the groundwork and context for what is to come.

As discussed above, the survey was designed as a census of the casino population. The survey was successful in obtaining useable data on 75 percent of all employees actively employed during the survey period.

But, we have another purpose in summarizing the data on demographic characteristics. We wish to determine whether our data derived from the survey agree with data as reported by the casinos. Our conclusion will be that our results conform closely to the reported data, lending confidence to our results.

Gender

Table 4.1
Employees by Gender (%)

	No Response	Female	Male	Total
Total	0.5	47.0	52.5	100.0
Bally's	0.7	47.9	51.4	
Caesars	0.5	47.5	52.0	
Claridge	0.3	48.8	50.9	
Harrah's	0.4	49.0	50.6	
Hilton	0.5	43.5	56.1	
Marina	0.5	46.9	52.6	
Plaza	0.6	46.5	52.9	
Resorts	0.6	48.2	51.2	
Sands	0.3	46.2	53.5	
Showboat	0.6	50.3	49.2	
Taj Mahal	0.4	44.4	55.2	
Tropicana	0.5	45.4	54.1	
Trump TCS	0.0	65.1	35.0	

Looking at Table 4.1 we see that as expected, the division between males and females is a nearly even split with women employed in 47.0 percent of casino jobs. This figure is consistent with Casino Control Commission reports which show women to be 46.8 percent of the Casino workforce as of March 1998.

Although there are differences in the individual demographic profiles of the casinos, they are generally very similar in their make-up. Hilton has the lowest female employment at 43.5 percent, and only the Trump Casino Services, with female employment of 65 percent, stands out as having a significantly higher number of women in their workforce than the average for the industry.

Minority Status

For minority status, Tables 4.2 and 4.3 show the race and Hispanic origin status of employees at each casino. Consistent with the Census and Bureau of Labor Statistics, we indicate Hispanic origin as an ethnic background rather than a racial group so that individuals can be from any of the racial groups, White, African-American, Asian, Native American, or Pacific Islander, and indicate a Hispanic origin as well. Since the viewpoint of many individuals does not correspond to this official perspective, respondents often listed either a race or a Hispanic origin, but not both. This led to a higher number of non-responses for these questions than was typically the case for other parts of the survey.

Looking first at the results for race, the distribution is about what we would expect to see. Whites make up a little over one-half of all employees, at 56 percent, with African-Americans constituting the second largest group with just under 20 percent. Asians round out the third significant racial group adding 11 percent to the total. For the individual casinos, Harrah's and Trump Casino Services are the only casino units with minority employment that is significantly lower than the mean, while Bally's has the highest level of minority employment, though not by a large margin.

Casino Employee Demographics

Table 4.2
Employees by Race (%)

	No Response	White	Black	Asian	Native American	Pacific Islander	Total
Bally's	10.4	51.2	22.8	11.6	1.9	2.1	
Caesars	8.1	59.4	18.2	10.8	1.2	2.3	
Claridge	8.5	51.0	23.5	13.7	1.5	1.9	
Harrah's	9.6	64.8	15.5	7.5	1.2	1.5	
Hilton	10.6	58.7	16.1	10.9	1.4	2.3	
Marina	10.3	58.8	16.8	10.4	1.5	2.2	
Plaza	13.0	51.8	21.7	9.9	1.7	1.9	
Resorts	9.4	56.4	21.6	10.0	1.0	1.6	
Sands	10.1	54.4	22.0	11.0	0.8	1.8	
Showboat	9.3	58.2	17.7	10.6	1.3	3.1	
Taj Mahal	8.8	53.8	18.5	15.5	1.3	2.1	
Tropicana	9.8	52.4	22.3	12.3	1.0	2.2	
Trump TCS	4.3	77.4	16.1	2.2	0.0	0.0	
Total	9.8	55.8	19.7	11.2	1.3	2.1	100.0

Table 4.3
Employees by Hispanic Origin (%)

	No Response	Hispanic	Non- Hispanic	Total
Bally's	15.4	18.9	65.8	
Caesars	12.5	16.6	70.9	
Claridge	17.2	14.6	68.2	
Harrah's	16.9	14.8	68.3	
Hilton	9.9	19.9	70.2	
Marina	13.5	17.6	68.8	
Plaza	13.1	21.4	65.6	
Resorts	16.0	15.4	68.5	
Sands	14.4	16.0	69.6	
Showboat	14.9	17.6	67.6	
Taj Mahal	15.6	15.8	68.6	
Tropicana	15.0	18.0	67.0	
Trump TCS	5.4	6.5	88.2	
Total	14.4	17.4	68.2	100.0

Casino Employee Demographics

Table 4.4
Employees by Race Hispanic Inclusive (%)

	No Response	White	Black	Asian	Native American	Pacific Islander	Hispanic	
Bally's	0.9	46.3	21.7	11.1	0.9	0.2	18.9	
Caesars	0.9	54.1	17.2	10.4	0.5	0.4	16.6	
Claridge	1.4	47.0	22.4	13.3	1.0	0.2	14.6	
Harrah's	2.4	60.5	14.6	6.8	0.6	0.3	14.8	
Hilton	0.7	52.3	15.4	10.5	0.7	0.6	19.9	
Marina	1.2	53.6	16.4	10.1	0.8	0.3	17.6	
Plaza	1.0	46.0	20.7	9.6	1.0	0.4	21.4	
Resorts	1.0	52.1	20.8	9.8	0.5	0.3	15.4	
Sands	1.0	49.9	21.3	10.7	0.4	0.5	16.0	
Showboat	1.1	52.7	16.8	10.1	0.9	0.9	17.6	
Taj Mahal	1.2	49.2	17.9	14.8	0.8	0.4	15.8	
Tropicana	0.9	46.3	21.6	12.1	0.7	0.4	18.0	
Trump TCS	1.1	74.2	16.1	2.2	0.0	0.0	6.5	
Total	1.1	50.7	18.9	10.8	0.7	0.4	17.4	100

Turning to individuals of Hispanic origin, we see from Table 4.3 that their presence is significant at more than 17 percent. Since the Casino Control Commission treats Hispanics as a separate racial group, Table 4.4 presents "race" in this alternative format. The figure for Hispanics remains the same at 17.4 percent, but since these individuals are no longer classified under the other race groups as well the numbers for these other groups decline. Note that when these responses are combined, the rate of non-response drops to just one percent. Consistent with national data, most Hispanics consider themselves to be white when they indicate a racial group. As a result, when Hispanics are counted as a separate race, the proportion of whites in the demographic composition of the casinos workforces drops the most dramatically. Whites now make up just 51 percent of casino employees, African-Americans drop to 19 percent, and Asians remain at 11 percent. Again, these figures are consistent with Casino Control Commission information which indicate that minorities make up 49.7 percent of casino employment as of March 1998. For the individual casinos, there is little

change when Hispanic is included as a racial group. Harrah's and Trump Casino Services remain on the lower side of minority employment. However, due to above average Hispanic employment, Plaza and Tropicana now vie with Bally's as having the highest level of minority employment.

Marital Status

Table 4.5 shows that the marital status of employees. Nearly one-half of employees (47 percent) are married, while just over one third are single (35 percent). Eleven percent of all employees are divorced. Marital status variation among the casinos is only marginal. Harrah's has the highest rate of married employees (50 percent), and the corresponding lowest rate of single employees (32 percent). The reverse is true for Bally's where 38 percent of employees are single and only 44 are married.

Table 4.5
Employees by Marital Status (%)

	No Response	Single	Married	Divorced	Separated	Widowed	Other	Total
Bally's	0.5	38.0	44.4	10.4	3.4	2.3	1.0	
Caesars	0.5	32.9	47.7	12.7	3.4	2.2	0.7	
Claridge	0.4	35.3	46.5	11.7	3.6	1.7	0.8	
Harrah's	0.4	31.9	49.7	11.4	3.6	1.9	1.1	
Hilton	0.7	36.5	45.8	10.8	3.7	1.7	0.8	
Marina	0.5	34.7	48.4	9.8	3.2	2.5	0.9	
Plaza	0.5	36.8	46.8	9.9	3.6	1.7	0.8	
Resorts	0.3	32.4	47.3	12.5	4.1	2.9	0.6	
Sands	0.6	35.8	47.0	10.5	3.5	2.2	0.5	
Showboat	0.5	33.2	49.0	11.6	3.4	2.0	0.3	
Taj Mahal	0.6	34.9	46.9	11.4	3.9	1.6	0.7	
Tropicana	0.4	37.8	45.1	10.8	3.4	1.8	0.7	
Trump TCS	0.0	34.4	48.4	10.8	2.2	3.2	1.1	
Total	0.5	35.2	46.9	11.1	3.6	2.0	0.8	100.0

Age

The casino age distribution is shown in Table 4.6. Most employees fall within the prime working age groups from 26-45 with the numbers trailing off in both directions. A full 61 percent fall within these central age groups, and the number increases to 88 percent when we expand the range to 21-55. Not surprisingly, Resorts, as the oldest casino, has the oldest distribution of employees with 21 percent of its employees over the age of 50, as compared to 16 percent for the average casino. Bally's followed by Tropicana and Plaza, have the youngest distributions of employees each with about 29 percent of their workforce under the age of 30, as compared to the average of 25.6 percent.

Education

Table 4.7 shows the educational attainment of casino employees. Only 11 percent of employees have less than a complete high school diploma or high school equivalency (GED). Forty percent have completed high school or attained their GED while an additional 32 percent have a trade/vocational degree or an Associate of Arts degree (AA). Thirteen percent have a Bachelor of Arts or Science, while only a handful have advanced degrees (1.6 percent). With the exception of Trump Casino Services, the educational distribution across casinos is fairly consistent. Plaza has a slightly higher proportion of workers with less than complete high school, while the proportion is somewhat lower than the average at Harrah's. As would be expected, employees at Trump Casino Services are considerably more educated than the average casino employees. They have significantly higher proportions of employees in the upper educational categories, and significantly lower levels of representation in the lower groups.

Casino Employee Demographics

Table 4.6
Employees by Age Groups (%)

No Response	Under 21.0	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	Over 65.0	Total
0.3	3.4	12.0	14.0	14.9	15.9	13.4	9.8	7.4	5.1	2.8	1.1	
0.3	2.5	8.0	10.5	16.0	19.0	14.7	10.9	8.1	5.1	2.8	2.0	
0.1	2.3	10.5	13.3	15.4	15.9	13.6	10.2	8.1	5.3	3.8	1.6	
0.3	2.2	8.2	12.0	16.5	19.1	13.9	10.3	7.3	5.0	3.3	2.1	
0.5	2.7	11.3	13.2	17.1	17.2	13.9	9.6	6.4	3.9	2.5	1.6	
0.3	1.9	9.2	13.3	17.3	18.4	14.7	9.6	6.1	5.0	2.7	1.7	
0.3	3.4	11.7	13.2	18.5	16.4	13.6	8.7	5.7	4.5	2.5	1.5	
0.5	1.3	8.4	11.9	15.6	15.5	15.7	10.1	8.7	5.9	3.5	3.0	
0.3	2.9	10.4	13.7	16.4	16.9	12.9	11.1	7.0	3.7	2.5	2.0	
0.2	2.1	8.6	13.5	17.2	18.0	13.7	9.8	6.8	5.0	2.6	2.5	
0.2	2.1	8.6	13.8	17.2	18.7	14.9	10.4	6.7	3.9	2.7	1.0	
0.2	3.5	11.1	14.2	16.7	17.4	12.9	9.3	5.9	4.4	2.7	1.7	
0.0	0.0	7.5	14.0	21.5	21.5	12.9	10.2	6.5	2.2	1.6	2.2	
0.3	2.6	9.9	13.1	16.6	17.4	14.0	9.9	6.9	4.7	2.8	1.8	100.0

Table 4.7
Employees by Education (%)

	No Response	Less than 12 Years	High School/ GED	Trade/ Vocational Degree	2 Years of College/ AA	4 Years of College/ BA/BS	Masters Degree	Doctoral Degree	Total
Bally's	1.2	12.2	39.6	10.9	22.2	12.5	1.3	0.2	
Caesars	0.8	9.8	39.9	10.8	22.2	14.8	1.7	0.1	
Claridge	1.0	11.4	40.0	11.7	21.0	13.5	1.3	0.2	
Harrah's	0.6	8.9	41.3	10.1	22.7	14.5	1.8	0.2	
Hilton	0.8	12.3	41.3	10.0	21.7	12.8	0.9	0.2	
Marina	0.8	11.2	40.3	10.2	21.9	13.7	1.7	0.2	
Plaza	1.4	13.2	40.6	10.5	21.0	12.0	1.1	0.2	
Resorts	0.7	9.8	39.6	10.6	23.2	14.6	1.4	0.2	
Sands	1.1	11.5	38.6	11.2	21.9	13.5	1.8	0.3	
Showboat	0.8	12.0	39.4	10.0	22.6	13.8	1.2	0.2	
Taj Mahal	1.2	11.8	41.2	9.7	21.8	12.5	1.7	0.1	
Tropicana	0.9	11.5	41.9	11.0	21.6	11.3	1.5	0.3	
Trump TCS	0.0	4.3	32.8	5.4	30.1	25.3	2.2	0.0	
Total	1.0	11.3	40.4	10.5	22.0	13.2	1.4	0.2	100.0

Casino Employee Demographics

EEO Categories

As would be expected, Table 4.8 shows that service workers are the most common equal employment opportunity (EEO) category of casino employees (36 percent), followed by officials and managers, and professional (each at 17 percent). This makes sense since dealers fall into the professional category. Again, in terms of the differences among the casinos, the profile for Trump Casino Services differs from the other casinos with significantly higher levels of office clerical, technical and management positions. Plaza has an unusually low proportion of professionals, while Resorts has few sales persons. Plaza, however, has an unusually high proportion of service workers (46 percent) suggesting that some of the individuals classified as professionals in other casinos may be classified as service workers at the Plaza. Similarly, Hilton has a lower than average number of service workers and a higher than average number of laborers.



Table 4.8
Employees by EEO Category (%)

	No Response	Officials Managers	Professionals	Technicians	Sales Persons	Office/ Clerical	Craft Workers	Operatives	Laborers	Service Workers	Total
Bally's	2.9	15.4	15.2	1.6	12.9	6.5	2.0	1.7	7.0	34.9	
Caesars	0.7	19.7	20.0	2.4	9.4	8.3	2.5	2.4	0.0	34.4	
Claridge	0.1	16.8	22.1	2.5	11.9	7.7	2.3	2.1	0.8	33.7	
Harrah's	0.6	14.2	17.9	3.7	11.8	5.4	0.9	4.0	1.3	40.2	
Hilton	0.5	17.9	20.7	2.5	11.2	5.4	1.4	2.1	9.2	29.0	
Marina	0.2	21.7	15.1	2.2	9.6	6.5	2.8	4.4	0.8	36.7	
Plaza	0.4	15.3	10.5	1.9	9.2	8.2	2.1	4.5	2.4	45.5	
Resorts	0.3	20.4	15.4	1.9	2.7	13.9	4.3	0.7	3.9	36.7	
Sands	0.6	18.5	17.9	3.3	8.6	8.6	1.1	3.8	0.5	37.1	
Showboat	0.7	16.6	16.0	2.3	9.7	8.7	2.3	2.5	3.2	37.9	
Taj Mahal	0.2	17.3	20.5	2.5	13.2	7.5	2.4	4.4	0.9	31.1	
Tropicana	0.6	15.4	16.5	2.0	11.4	8.6	2.4	2.7	4.8	35.8	
Trump TCS	0.5	26.3	18.8	15.1	0.0	35.0	0.0	0.0	3.8	0.0	
Total	0.7	17.2	17.1	2.4	10.4	8.0	2.2	3.0	3.1	35.8	100

Departmental Breakdowns

As with the EEO findings, the survey results by department are largely consistent with our expectations. Examining Table 4.9, we see that "Table Games" and "Food and Beverage" are by far largest departments with 22 percent and 21 percent proportions respectively. "Hotel Guest Services," "Slots" and "Security/Surveillance" provide the remaining areas of significant employment. The rather large "Other" category (13 percent) results from the fact that there is no common nomenclature among the casinos for departmental names. As a result we were forced to devise generic names along sensible lines for the departmental divisions. While this method did effectively capture most employees, not all could be fit neatly within these artificial categories. As would be expected, Trump Casino Services has the largest proportion of workers in this other department category implying that they have the largest proportion of workers who fall outside of the broad generic groups that are typically considered part of casino operations.

It is also notable that, as expected, Trump Casino Services employees are almost exclusively within the "Administrative" and "MIS" (Management Information Systems) departments. Looking at the other casinos, we see that the low proportion of professionals for the Plaza is essentially due to their far lower proportion of "Table Games" employees (at just under 14 percent) than is seen at the other casinos. Taj

Casino Employee Demographics

Mahal, Caesars and Claridge also stand out as having relatively fewer employees in "Food and Beverage" departments. Other figures of interest are the higher than average "Administrative" proportion for Caesars (6.8 percent) and Sands (6.4 percent), and the higher than average "Change" percentage at Sands (3.1).

Earnings

We also mention that nearly all of those included in the survey results were full time employees (91 percent) with very little variation among the casinos (excluding Trump Casino Services which had 98 percent full time employees). Most worked the day shift (52 percent), and a third of all employees worked the swing shift, again with very little variation among casinos (TCS had 93 percent of employee on day shift). As indicated in Figure 4.1, most employees earned between \$20,000 and \$40,000. Of those employees providing salary information, 56 percent fell in this range, while 81 percent earned between \$15,000 and \$50,000. Since most employees in our survey worked full-time, the figures for full-time employees mirror those for all employees. The large proportion of part-time employees in the upper earnings ranges does bear mention. Certainly this is an artifact of the cas-

Table 4.9
Employees by Department (%)

	No Response	Admins- trative	Food & Beverage	Slots	Table Games	Cashier	Change	Hotel Guest Services	Hotel Retail	Security/ Surveillance	Maintenance/ Construction	Entertain- ment	Staff Entertainers	MIS	Other	Total
Bally's	0.9	3.9	23.5	8.1	20.8	7.7	1.8	9.9	1.2	8.2	3.5	0.1	0.0	1.0	9.5	
Caesars	1.1	6.8	16.4	6.8	27.2	6.6	0.4	10.1	0.5	6.8	3.7	0.5	0.0	1.1	12.1	
Claridge	1.1	5.4	16.4	8.8	26.1	5.9	2.1	7.0	0.6	7.3	4.8	0.6	0.0	1.6	12.4	
Harrah's	1.2	3.3	22.5	7.7	21.9	7.4	1.0	10.4	0.9	4.3	2.5	1.9	0.0	1.1	13.9	
Hilton	1.2	3.4	24.6	6.3	27.7	5.3	1.4	5.8	1.8	7.0	3.0	1.0	0.3	0.6	11.0	
Marina	0.8	3.7	20.0	8.0	23.7	6.2	1.3	8.6	1.0	6.5	4.8	1.1	0.1	0.2	14.1	
Plaza	1.7	3.4	24.7	5.6	13.6	8.8	0.6	9.8	0.7	9.6	4.6	0.9	0.0	0.3	15.7	
Resorts	1.3	4.8	24.3	5.5	19.0	5.2	1.7	8.5	0.7	7.0	5.2	0.8	0.4	1.1	14.6	
Sands	1.3	6.4	21.9	5.6	21.6	5.8	3.1	9.3	0.5	6.2	2.4	1.0	0.3	0.7	14.1	
Showboat	1.4	5.6	24.2	7.0	20.6	6.0	1.9	7.6	0.9	4.6	4.9	0.7	0.1	0.7	14.0	
Taj Mahal	0.9	4.1	16.1	6.8	26.8	9.1	2.1	10.0	0.4	5.4	4.3	0.9	0.0	0.4	12.7	
Tropicana	1.1	3.8	21.5	6.1	20.6	5.8	2.0	10.3	0.7	5.9	4.6	1.2	0.0	0.8	15.4	
Trump TCS	0.0	40.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.7	26.9	
Total	1.1	4.6	21.2	6.8	22.2	6.8	1.5	9.1	0.8	6.6	4.0	0.9	0.1	0.9	13.2	100.0

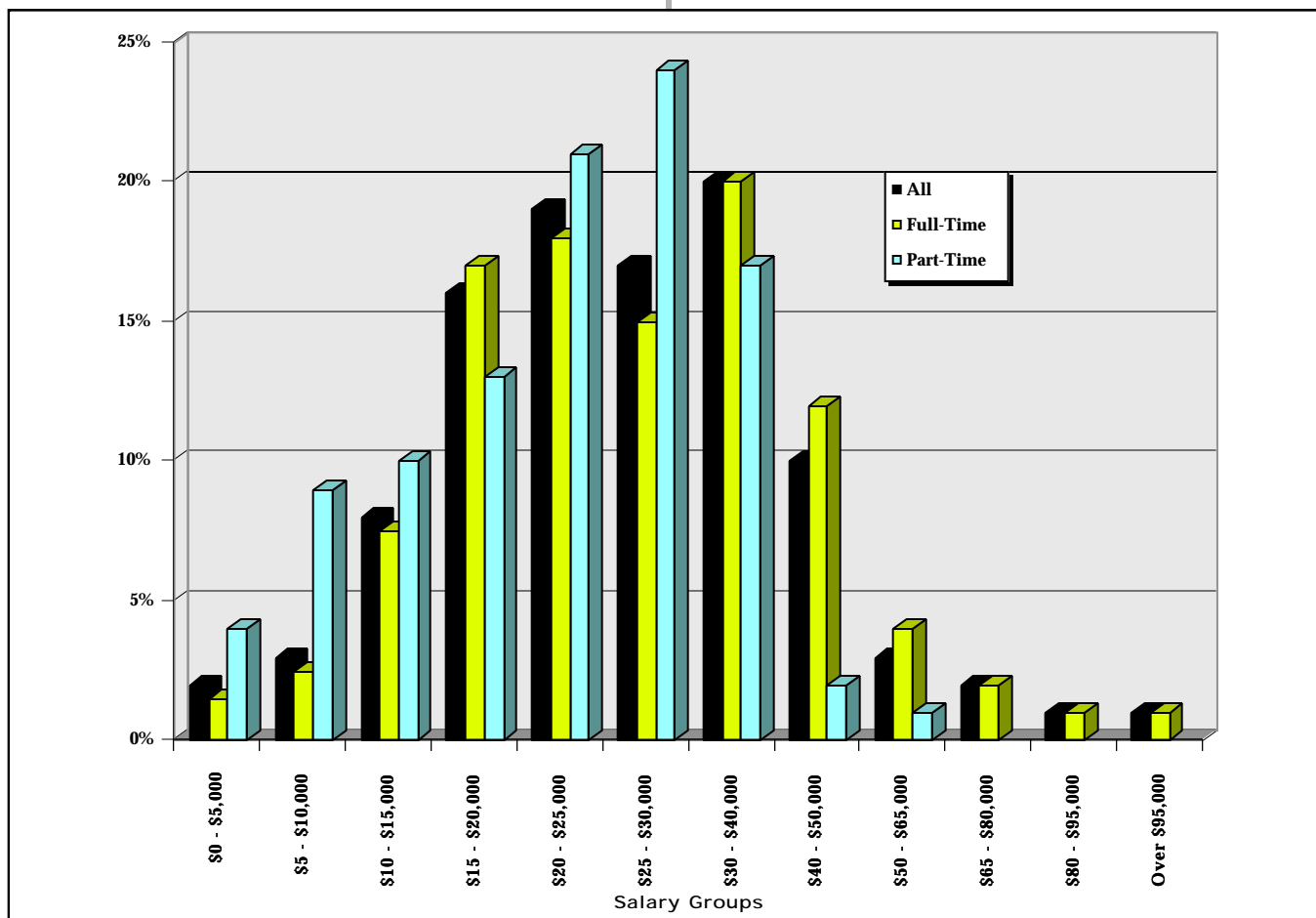
Casino Employee Demographics

no environment which provides unusually high earnings opportunities for part-time employees. It is important to remember, however, that highly paid, part-time employees comprise only a very small minority of the casino workforce.

Only about 18 percent of respondents did not provide an annual salary response, and of those, nearly all provided wage data. Thus of the nearly 34 thousand completed surveys used in for the study, only 1.5 percent of respondents provided no salary or wage earnings data.

Figure 4.2 shows the distribution of wages for employees providing wage group data. What stands out from this chart is the number of full-time employees earning less than \$5 per hour. These individuals are tipped employees comprised almost exclusively of dealers (EEO professionals in the "Table Games" department) and food and beverage servers (EEO service workers from the "Food and Beverage" department). With the exception of this group, the data follows what we would expect in that most employees providing hourly wage data earn between \$7 and \$13 per hour.

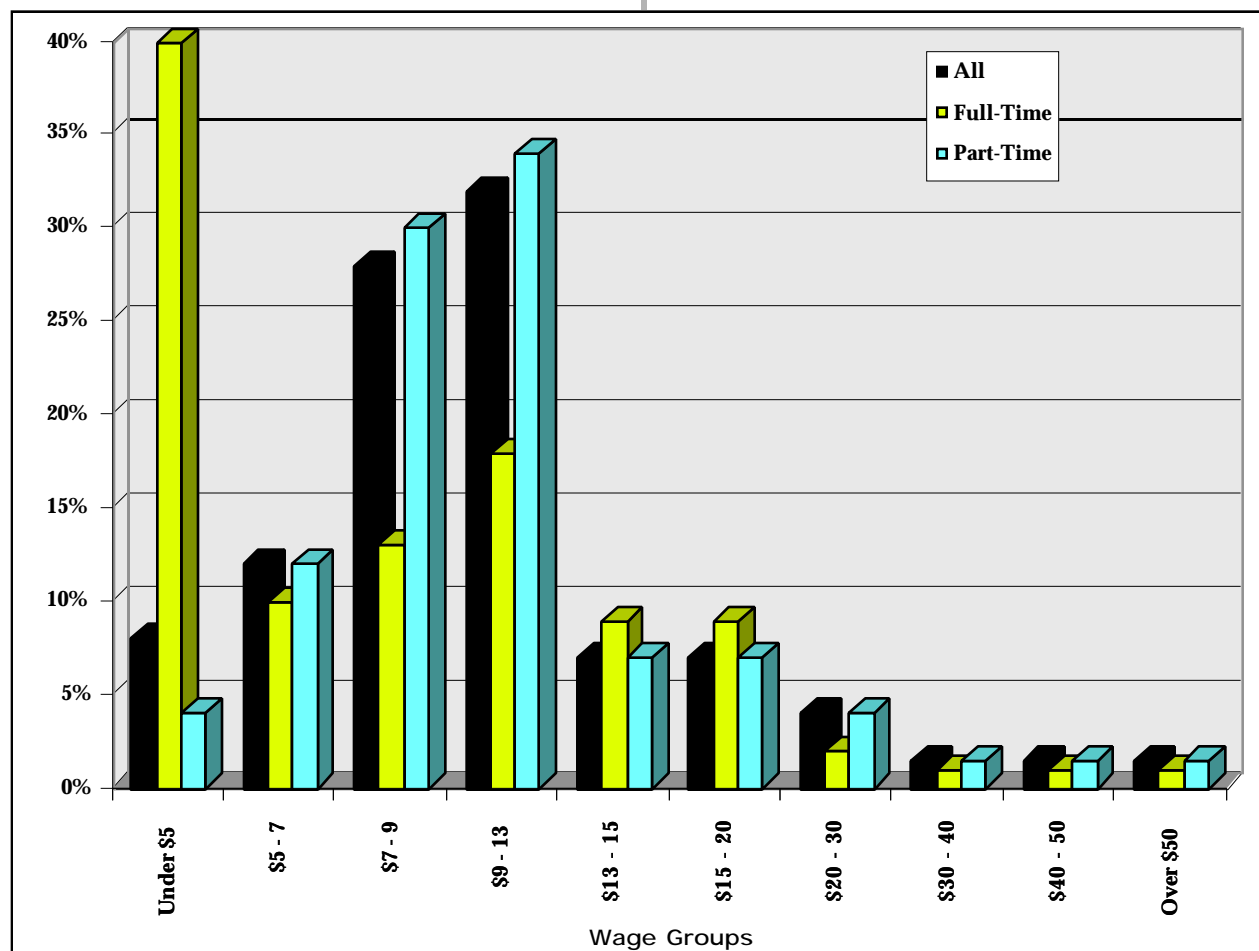
Figure 4.1
Employees by Annual Salary (%)



Results As Expected

Casino Employee Demographics

Figure 4.2
Employees by Hourly Wages (%)



Results As Expected

This examination of the demographic characteristics of our sample gives us confidence in the validity of the data. Our sample consists of data collected by better than 75 percent of Atlantic City's casino industry employees. The data is consistent with the Commission's records in terms of known characteristics such as minority and gender status. Beyond this, the data are consistent with what we know about the casino industry in New Jersey in general. Down the line from ethnic origin, to department, to EEO group and salary range, the data invariably provide statistics that are consistent with expected notions of the demographic composition of the casino workforce.

Disability Findings

We define disability at the casinos in a way that is consistent with the 1992 New Jersey Demographics of Disability Survey conducted by the Bureau of Economic Research and national surveys such as the Current Population Survey (CPS) and Survey of Income and Program Participation (SIPP) conducted by the Bureau of Labor Statistics. In all such surveys disability is defined according to work limitation. Essentially, an individual is considered to be disabled if they have a physical or mental condition that either prevents them from working or limits them in the amount or type of work they can do.

Since by default, all participants in the casino survey are working, we need only be concerned with work limitations. The casino survey determines a comparative measure of work limitations with two questions. First, we ask individuals to identify all medical conditions they currently have. The list serves two purposes. First it provides a quick, simple and efficient means for employees to identify their current medical conditions from the most common conditions associated with disability. Second, by listing potentially disabling medical conditions, individuals are given a set of examples to assist them in understanding what is meant by a potentially disabling medical condition. In this way, employees are far more likely to identify conditions, such as high blood pressure or arthritis, that are not generally associated with “disabilities” in the common nomenclature. At the same time the list also provides examples that can provide guidance in assisting employees to identify less common potentially disabling conditions that are not included in the list. Thus, the survey also provides an “Other Serious Medical Conditions” choice where participants can indicate non-listed conditions. The proportion of individuals indicating that they have any of the indicated medical conditions is shown in Table 5.1.

We can see that 35 percent of all employees indicate that they have one or more potentially disabling medical conditions. This figure is consistent with our previous work and other studies that have found that about one third of all working age individuals have such a condition. When we look further at the breakdown of these conditions we see the number

one medical condition cited is “Back Disorders” with just under 12 percent of the workforce affected. The next most common conditions are “High Blood Pressure” (9.2 percent), “Other Joint/Orthopedic Problems” (6.9 percent), “Arthritis or Rheumatism” (6.7 percent), “Respiratory Problems” (4.8 percent), “Obesity” (3.7 percent), “Diabetes” (3.1 percent), and “Vision Impairment” (2.9 percent).

There were a number of conditions specified by individuals beyond the list of conditions provided in the survey. Where possible, conditions such as “foot problems” were “backcoded” into the appropriate listed condition, in this case, “Other Joint/Orthopedic Problems.” After this backcoding was completed, a number of respondents still had conditions ranging from cerebral palsy (four individuals) to immune system problems (11 individuals) that did not fit within the set of conditions listed in the survey. With the exception of a handful of conditions (41 individuals) that could not be categorized under standard medical terminology, each of these other conditions were grouped and given its own new variable. The most common of these added conditions were “Gastro-Intestinal Problems” affecting 60 individuals (0.2 percent) and “Migraine Headaches” affecting 40 workers (0.1 percent).



Disability Findings

Table 5.1
Casino Employees with Medical Conditions

Medical Condition	Has Condition	
	Number	% of Casino Employees
All Conditions	12,404*	35.00%
Back Disorders	4,210	11.90%
High Blood Pressure	3,250	9.20%
Other Joint/Orthopedic Problems (such as Carpal Tunnel or Hip problems)	2,431	6.90%
Arthritis or Rheumatism	2,365	6.70%
Respiratory Problems	1,701	4.80%
Obesity	1,299	3.70%
Diabetes	1,102	3.10%
Vision Impairment (Not correctable with lenses)	1,036	2.90%
Hearing Impairment	737	2.10%
Heart Disease	729	2.10%
Recovering Alcoholic/Substance Abuse	707	2.00%
Psychiatric or Emotional Disorder	467	1.30%
Learning Disability (such as Dyslexia or ADD)	368	1.00%
Speech Impairment	277	0.00%
Cancer	253	0.70%
Blood Disorder (such as Sickle Cell Anemia)	229	0.60%
Convulsive Disorders (such as Epilepsy)	174	0.50%
Missing Extremities (fingers, hands, arms, feet or legs)	171	0.50%
Disfigurement	140	0.40%
Developmental Disability	84	0.20%
Paralysis	83	0.20%
AIDS/HIV	70	0.20%
Other Conditions	69	0.20%
Multiple Sclerosis	62	0.20%
Gastro-Intestinal Disorders	60	0.20%
Mental Retardation	51	0.10%
Migraine Headaches	40	0.10%
Thyroid Disorders	33	0.10%
Kidney Disorders	30	0.10%
Gynecological Disorders	9	0.00%
Skin Disorders	8	0.00%

* This is the total number of employees who indicated that they had one or more conditions. The number of persons who checked that they had a condition will not add up to this total since persons could check more than one condition.

Disability Findings

Table 5.2
Casino Employees with Disabilities
Due to a Current Job Limitation

Disabling Condition	Condition is Limiting in Current Job	
	Number	% of Casino Employees
All Conditions	2,902*	8.20%
Back Disorders	1,456	4.10%
Other Joint/Orthopedic Problems (such as Carpal Tunnel or Hip problems)	900	2.50%
Arthritis or Rheumatism	488	1.40%
Respiratory Problems	356	1.00%
High Blood Pressure	274	0.80%
Vision Impairment (Not correctable with lenses)	154	0.40%
Psychiatric or Emotional Disorder	141	0.40%
Hearing Impairment	131	0.40%
Diabetes	123	0.30%
Heart Disease	113	0.30%
Obesity	97	0.30%
Learning Disability (such as Dyslexia or ADD)	82	0.20%
Speech Impairment	59	0.20%
Developmental Disability	39	0.10%
Disfigurement	34	0.10%
Recovering Alcoholic/Substance Abuse	32	0.10%
Cancer	30	0.10%
Paralysis	29	0.10%
Blood Disorder (such as Sickle Cell Anemia)	28	0.10%
Convulsive Disorders (such as Epilepsy)	22	0.10%
Missing Extremities (fingers, hands, arms, feet or legs)	19	0.10%
Multiple Sclerosis	18	0.10%
Mental Retardation	18	0.10%
AIDS/HIV	17	0.00%
Other Conditions	17	0.00%
Migraine Headaches	16	0.00%
Gastro-Intestinal Disorders	12	0.00%
Gynecological Disorders	4	0.00%
Kidney Disorders	4	0.00%
Sleep Disorders	2	0.00%
Skin Disorders	1	0.00%
Thyroid Disorders	1	0.00%

* This is the total number of employees who indicated that they had one or more conditions. The number of persons who checked that they had a condition will not add up to this total since persons could check more than one condition.

Disability Findings

With the exception of the high number of respiratory problems at the casinos, these figures are largely consistent with what has been found in the working age population in general.

As we have said, to be consistent with other relevant surveys, a medical condition is only a disability if it causes a work limitation. The next step of the survey was to ask the question: Does the medical condition you have limit the amount or kind of work you could do at your current job? For individuals indicating yes to this question, the basic test of disability is met: they have a physical or mental medical condition that results in a work limitation, even though the condition does not prevent them from working altogether. Table 5.2 indicates the total number of individuals who are disabled due to having a medical condition that results in a current job limitation, and the most common medical conditions resulting in such disabilities. So while Table 5.1 indicated the most common medical conditions within the casino workforce, Table 5.2 indicates the most common disabling conditions -- those conditions resulting in a work limitation.

Based on this work limitation definition of disability, we find that 8.2 percent of the casino workforce is disabled. So while 35 percent of the casino population has a potentially disabling condition, only 23 percent of those with such conditions are actually disabled. As was the case with medical conditions, Table 5.2 also indicates that "Back Disorders" are the most common disabling conditions. But while 16 percent of the casino workforce has such a medical condition, it only results in a work limitation in one-quarter of such individuals -- in four percent of the workforce overall.

It is also important to note that "Other Orthopedic/Joint Problems" (2.5 percent), "Arthritis or Rheumatism" (1.4 percent), "Respiratory Problems" (1.0 percent), "Vision Impairment" (.04 percent), "Psychiatric or Emotional Disorders" (.04 percent) and "Hearing Impairment" (0.4 percent) all move up in importance in relation to disability, as compared to simply having the condition. What this means is that while there are other conditions that are more common, these conditions are more likely to be serious enough to result in disability.

Given the passage of the Americans with Disabilities Act of 1990 and its emphasis on job oppor-

tunity and acquisition, it can be argued that a broader definition than relating disability only to current job limitations, is appropriate. The ADA states that individuals are disabled if they have a physical or mental impairment that substantially limits one or more of their major life activities (such as work), have a record of such an impairment, or are regarded as having such an impairment. It is for this reason that we include two additional questions regarding the impact of a worker's medical condition on their work opportunities.

The first of these additional questions relates to perspective. For an individual who is not currently working, the question as to whether their medical conditions limit them in the "kind of work" they can do is likely to be interpreted as whether they are limited in their choice of jobs as a result of their medical conditions. For an individual who is currently working, the question is likely to be interpreted whether they are limited in the tasks they can perform that are part of their current job. However an individual who is currently working but is limited in job change or promotion as a result of their medical conditions would be expected to be considered disabled under the ADA.

For example, an individual who is confined to a wheelchair and has a desk job with the appropriate accommodations may not be limited in the amount or kind of work they can do at that job. There may be other jobs that they could otherwise do, if not for the condition that necessitated the wheelchair, but that they cannot do as a result of their condition. The reason for the restriction may be due to physical limitations inherent in the job or it may result from financial limitations in that the necessary accommodations to remove restrictive barriers are prohibitively expensive and would thus cause an "undue hardship" on the employer.

In addition to this broader interpretation of job limitations, the ADA was designed to protect individuals who have no work limitation *per se* in the amount or type of work they are able to do, but may be prevented from jobs due to prejudice or inaccurate preconceived notions on the part of employers. Such prejudice may effectively restrict an individual's job opportunities.

Disability Findings

of individuals simply because they are generally “regarded” as disabled. Again, a simple question asking whether individuals are limited in the amount or type of work they can do as a result of their medical conditions, is unlikely to identify such individuals as disabled even though they would likely be protected due to disability under the ADA.

The first question we add to adjust for this potential shortcoming of the “standard” disability question is to ask whether the individual is limited as a result of their condition in the amount or kind of work they could do at other jobs they are otherwise qualified to do. When we include this second qualifier for disability the total number of disabled individuals at the casinos increases 2.6 percentage points, from 8.2 percent to 10.8 percent. These additional individuals indicated that they had a medical condition that did not limit them in their current job, but that did limit them in other jobs they are otherwise qualified to do.

The final question added to adjust for possible discrepancies between the ADA definition of disability and the standard survey definition, is to ask whether the workers feel that employers in general would consider them to be disabled because of their condition, regardless of whether it actually causes limitation in their specific case. When this last disability qualifier is added, an additional 1.8 percent of the casino population moves from non-disabled to disabled status.²

Table 5.3 considers these alternative measures of disability and indicates that if we define disability in a manner that more closely aligns with the ADA concept of disability rather than the standard survey definition, 12.3 percent of the Atlantic City casino workforce would qualify as disabled.³ This means that under this alternative definition, for the 36 percent of the workforce with medical conditions, just over one-third are limited due to this condition in their current job, their choice of jobs, or as a result of being regarded as disabled by employers.

When we look at the most common medical conditions resulting in disability according to this broadened definition, we see that “Back Conditions”

again dominates the cause of disability with 5.7 percent of casino employees reporting such limitations. It is interesting to note that the highly stigmatizing conditions of “Obesity” (0.9 percent), “Recovering Alcoholic/Substance Abuser” (0.4 percent) and “Disfigurement” (0.2 percent) all move up significantly as conditions associated with disability when we include employer perceptions of disability (prejudice) into the definition.

In what follows we will remain with the “standard” survey definition of disability (a medical condition that limits the individual in the amount or kind of work they can do in their current job), unless otherwise indicated. This definition is the most conservative measure of disability and allows us to maintain better comparability with existing disability statistics.

²There is an order of scope to these disability definitions. A current job limitation implies limitations in the individual's choice of jobs and also implies that the person would likely be regarded as disabled by employers. Similarly, a limitation in the choice of jobs implies that the person would be regarded as disabled but does not imply that they are limited in their current job. Finally, simply being regarded as disabled does not necessarily imply a limitation in the choice of jobs, or a limitation in the current job. The survey incorporates this order of scope in the way the questions are asked. A person with a “yes” response to a current job limitation for a condition, was not asked whether they were limited in their choice of jobs or whether they were regarded as disabled for that condition since by implication the answer is also “yes.” Similarly, a person with a “yes” response to a choice of jobs limitation was not asked whether they were regarded as disabled for that condition since by implication the answer is also “yes.” Answers provided beyond this first “yes” response for each condition were ignored.

³Since individuals may have more than one disability, the figures for disabled due to a current job limitation (8.2 percent), a choice of jobs limitation (2.6 percent), and regarded as disabled (1.8 percent) add up to 12.6 percent rather than this 12.3 percent figure. This is because an individual may be disabled due to a current job limitation for one condition and may be regarded as disabled for another condition. In the sum of the three statistics above (12.6 percent), such individuals get counted twice, but in the 12.3 percent figure they would only be counted once.

Disability Findings

Table 5.3
Casino Employees with Disabilities Due to a Current Job Limitation,
Choice of Jobs Limitation or Employer Perceptions

Disabling Condition	Condition is Work Limiting or is Regarded as Disability by Employers	
	Number	% of Casino Employees
All Conditions	4,355*	12.30%
Back Disorders	2,001	5.70%
Other Joint/Orthopedic Problems (such as Carpal Tunnel or Hip problems)	1,185	3.30%
Arthritis or Rheumatism	712	2.00%
Respiratory Problems	531	1.50%
High Blood Pressure	427	1.20%
Obesity	308	0.90%
Vision Impairment (Not correctable with lenses)	247	0.70%
Hearing Impairment	242	0.70%
Heart Disease	231	0.70%
Psychiatric or Emotional Disorder	220	0.60%
Diabetes	206	0.60%
Learning Disability (such as Dyslexia or ADD)	147	0.40%
Recovering Alcoholic/Substance Abuse	126	0.40%
Speech Impairment	107	0.30%
Blood Disorder (such as Sickle Cell Anemia)	74	0.20%
Cancer	65	0.20%
Paralysis	64	0.20%
Convulsive Disorders (such as Epilepsy)	56	0.20%
Disfigurement	56	0.20%
Developmental Disability	48	0.20%
Missing Extremities (fingers, hands, arms, feet or legs)	41	0.10%
AIDS/HIV	35	0.10%
Multiple Sclerosis	32	0.10%
Other Conditions	30	0.10%
Mental Retardation	28	0.10%
Gastro-Intestinal Disorders	21	0.10%
Migraine Headaches	20	0.10%
Kidney Disorders	7	0.10%
Gynecological Disorders	5	0.00%
Sleep Disorders	3	0.00%
Thyroid Disorders	3	0.00%
Skin Disorders	2	0.00%

* This is the total number of employees who indicated that they had one or more conditions. The number of persons who checked that they had a condition will not add up to this total since persons could check more than one condition.

Disability Findings

Accommodation Use

In addition to collecting information on disabilities, the survey also collected data on the use of accommodations and devices to assist workers with medical conditions. As part of the data cleaning process, accommodations were checked against reported medical conditions for consistency. Individuals with conditions but no accommodations would fill in all of the bubbles in the “No” column of the survey for the “Accommodations” section of the survey. In reviewing the surveys it became apparent that some individuals simply got started in the wrong column, and completed the entire “Yes” column rather than the “No” column. Accommodation responses where individuals cited more than eight accommodations were thus assumed to result from the wrong column of responses being completed and were ignored. Similarly, reported accommodations where no medical condition was identified were also ignored. Finally, all accommodations that did not fit with the reported medical condition are not included in the accommodations data. For example, if an individual did not report a speech impairment, then a reported “Communication Device” accommodation was ignored.

Table 5.4 shows the incidence of accommodation usage as a result of indicated medical conditions among the casino population once these adjustments to the data were completed. A total of 3.9 percent of the casino workforce utilizes at least one accommodation or assistive device to ameliorate the affects of their medical condition. The table also indicates that “Work schedule modifications” (1.1 percent) followed by “Job duty modifications” (0.8 percent), “Workstation modifications” (0.5 percent), and “Wears a Brace” (0.4 percent) are the most common accommodations made at the casinos. Accommodations in the form of “Equipment Modifications,” “Handicapped Parking,” the use of a “Cane, crutches, or walker,” and some sort of “Specialized Training” were also cited in fairly significant numbers each with 0.3 percent of employees).

As was the case with medical conditions, respondents were permitted to specify other accom-

modations that were not included in the survey list. The responses provided indicate the degree to which common sense often guides effective accommodation. Some of these other accommodations worthy of mention were coworker assistance (backcoded as a duty modification), breaks for, and the use of medications to control conditions, and allowing employees with short stature the use of a box to stand on while they work. In other cases the accommodation involved allowing the employee to break from general policies such as permitting them use elevators and escalators usually reserved for patrons, drink water in their workstation (both backcoded as a duty modifications), wear tinted lenses while on duty, or sit on a chair while they work (backcoded as a workstation modification).



Disability Findings

Table 5.4
Casino Employees with Medical Conditions
Using Aids, Assistive Devices & Accommodations

Aid or Accommodation	Has an Accommodation	
	Number	Percent
All Accommodations	1,386*	3.90%
Work schedule modifications	398	1.10%
Job duty modifications	300	0.80%
Workstation modifications	182	0.50%
Wears a brace	128	0.40%
Equipment modifications	120	0.30%
Handicapped parking	111	0.30%
Cane, crutches or walker	98	0.30%
Specialized training	92	0.30%
Job coach	57	0.20%
Takes medication	57	0.20%
Uses an inhaler	42	0.10%
Uses a hearing aid	40	0.10%
Modified computer hardware	39	0.10%
(such as specialized keyboards)		
Modified computer software	26	0.10%
(specialized programs)		
Sign language interpreter	26	0.10%
Reader/interpreter for the blind	26	0.10%
Communication device	25	0.10%
(such as language board, TDD/TYY)		
Wheelchair	22	0.10%
Guide dog (or service dog)	16	0.00%
Wears foot orthotics	16	0.00%
Gets professional services	13	0.00%
Other accommodations or assistive devices	12	0.00%
Uses a TENS units(transcutaneous electrical nerve stimulation)	6	0.00%
Wears special lenses or eye glasses	6	0.00%
Takes insulin	6	0.00%
Uses a medical monitoring device	5	0.00%
Has a prothesis	2	0.00%

* This is the total number of employees who indicated that they had one or more conditions. The number of persons who checked that they had a condition will not add up to this total since persons could check more than one condition.

Disability Findings

Accommodation Use As An Indication of More Severe Disabilities

Not all individuals using accommodations are disabled. Due to the way we have defined disability (under the “standard” survey definition), the accommodation may effectively remove the limitation of a condition and thus prevent its limiting effect on work. Among those who are also disabled, the need for an accommodation can be interpreted as a measure of severity as compared to individuals with the same disabling conditions and no accommodations. Table 5.5 shows the most common disabling conditions which also involve a workplace accommodation.

Overall, the data indicate that 2.0 percent of casino employees have disabilities and utilize some form of accommodation to assist them with their underlying disabling condition. The most common disabling condition with an associated accommodation once again is “Back Disorders,” affecting 421 individuals (1.2 percent). There is no change in the relative frequency of conditions until we get to “Obesity” (0.2 percent) which replaces “Psychiatric or Emotional Disorders” as the seventh most common disabling condition.

More interesting is the relative proportion of persons needing accommodations of those who are disabled due to a current job limitation. On average, 25 percent of the 2,902 workers with disabilities also have some form of associated accommodation. As might be expected, all 29 individuals with “Paralysis” also have an accommodation. The relative accommodation rate is also predictably high for “Multiple Sclerosis” (72.2 percent), “Cancer” (70.0 percent), “Disfigurement” (64.7 percent) and “Missing Extremities” (63.2 percent). Similarly, the conditions with relatively low rates of accommodation, such as “Back Disorders” and “High Blood Pressure,” are in line with what we would expect as well. “Blood Disorder” (71.4 percent) is the only disability that stands out as being accommodated to a higher degree than would be commonly expected. Closer examination reveals that modified schedules (65 percent) and job duties (55 percent) are the two main accommodations for such individuals so that the accommodation rate seems plausible.



Disability Findings

Table 5.5
Casino Employees with Medical Conditions
Using Aids, Assistive Devices & Accommodations

Disabling Condition	Has Accommodation & Is Disabled		% of Disabled Employees with Accommodation
	Number	Percent	
All Conditions	726*	2.00%	25.00%
Back Disorders	371	1.20%	25.50%
Other Joint/Orthopedic Problems (such as Carpal Tunnel or Hip problems)	323	1.00%	35.90%
Arthritis or Rheumatism	165	0.50%	33.80%
Respiratory Problems	106	0.30%	29.80%
High Blood Pressure	53	0.20%	19.30%
Vision Impairment (Not correctable with lenses)	51	0.20%	33.10%
Obesity	42	0.20%	43.30%
Hearing Impairment	39	0.10%	29.80%
Psychiatric or Emotional Disorder	43	0.10%	30.50%
Heart Disease	36	0.10%	31.90%
Diabetes	41	0.10%	33.30%
Paralysis	29	0.10%	100.00%
Learning Disability (such as Dyslexia or ADD)	19	0.10%	23.20%
Cancer	21	0.10%	70.00%
Disfigurement	2	0.10%	64.70%
Blood Disorder (such as Sickle Cell Anemia)	20	0.10%	71.40%
Speech Impairment	16	0.10%	27.10%
Developmental Disability	14	0.00%	35.90%
Missing Extremities (fingers, hands, arms, feet or legs)	12	0.00%	63.20%
Multiple Sclerosis	13	0.00%	72.20%
Recovering Alcoholic/Substance Abuse	10	0.00%	31.30%
Convulsive Disorders (such as Epilipsy)	7	0.00%	31.80%
AIDS/HIV	9	0.00%	52.90%
Mental Retardation	4	0.00%	22.20%

* This is the total number of employees who indicated that they had one or more conditions. The number of persons who checked that they had a condition will not add up to this total since persons could check more than one condition.

Disability Findings

Disabilities By Demographic Characteristics

We are interested in how disability varies across the Atlantic City casinos. It is a fair question to ask why we care about such variation. Certainly differences in disability employment rates will mean different things to different constituencies. From the policy perspective, the casinos are charged with providing fair, and in some cases, “affirmative” opportunity to labor force participants with disabilities. Given this it would seem that higher rates of employment of disabled employees would suggest more effective policies in meeting such responsibilities. For a number of reasons, however, the issue is not entirely clear-cut.

Some may suggest that high rates of disability may be reflective of a less safe and healthy work environment. Theoretically, a casino that does more to injure or otherwise disable its employees could, as a result, have a higher proportion of workers with disabilities. It would seem illogical, however, that an employer that is less inclined to prevent disability is more inclined to hire previously disabled workers and retain workers that become disabled. Consistent with this, evidence suggests that disability employment policy at a firm is a function of the employer’s perceived ease of employee substitution. As a result, employers that place a low value on employee retention and/or are able to easily replace employees are less likely to invest in employee safety and employee retention. Thus, employers who tend to disable employees are also more likely to replace such employees once the disability occurs and tend to terminate disabled workers or place them on inactive status. As a result disabled employees are unlikely to remain with the firm and are thus unlikely to be represented in the active employee population.

Our sample is from active employee at the casinos. If all other pertinent characteristics are the same from one casino to the next, a higher proportion of employees with disabilities would thus be expected

to indicate more successful human resource policies with respect to the hiring of disabled applicants and the retention of employees who become disabled. But

we know that demographic characteristic are also related to disability. Disability tends to increase as individuals age, and tends to decline as education levels increase. Disability also tends to vary by gender and ethnicity. Above, we examined how the casinos differ in their demographic composition. As a result, to the degree that disability varies by these demographic characteristics, so will disability rates, strictly as a function of demographic composition. The first step, then, is to look at the relationship between disability and demographics at the casinos. Once we have identified the key components of disability variation according to demographic make-up, we will be in a position to account for these differences in our disability by casino analysis.

Table 5.6 reviews our disability findings thus far. A total of 35 percent of employees at the casinos have a potentially disabling medical condition.⁴ Of these individuals with medical conditions, just under one-quarter (8.1 percent of the total population) have a condition that limits them in their current job and thus would be considered disabled in a way consistent with national statistics. Expanding our disability definition in a way consistent with the ADA, 12.3 percent of the employee population would be considered disabled in that they have a medical condition that either limits them in their current job, their choice of jobs, or they tend to be regarded as disabled by employers. A total of 3.9 percent of employees use some form of accommodation, and 2.0 percent are disabled due to a current job limitation caused by a medical condition and use an accommodation to assist them with that limitation or condition.

⁴Table 5.6 also introduces confidence intervals for our estimates to give a sense of the statistical accuracy of our disability statistics. Looking at the third column, we see the value 0.3 in parentheses. This indicates that we can be about 95 percent certain that the true proportion of employees with medical conditions falls between 34.7 percent and 35.3 percent (that is within plus or minus two standard deviations of our estimate).

Disability Findings

Table 5.6

Medical Conditions, Disability & Accommodation for All Demographic Groups (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
All Groups	35	(0.30)	8.2	(0.10)	12.3	(0.20)	3.9	(0.10)	2	(0.10)

When we break out these disability factors by gender, we see in Table 5.7 that women are more likely to have conditions, be disabled and use accommodations than are men. Women are about 11 percent more likely to be disabled than men (8.8 percent as opposed to 7.7 percent), and are nearly 40 percent more likely to be disabled with an accommodation.

The confidence intervals also indicate that these differences between the sexes are statistically significant in that, for example, we can be 95 percent certain that the current job limitation proportion is at most 8.0 percent for men, while the same figure for women is at least 8.4 percent.

Table 5.7

Medical Conditions, Disability & Accommodation by Gender Groups (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Female	36.4	(0.60)	8.8	(0.40)	12.9	(0.40)	4.4	(0.30)	2.3	(0.20)
Male	33.8	(0.60)	7.7	(0.30)	11.8	(0.40)	3.5	(0.20)	1.7	(0.20)
NA	37.0	(7.30)	7.5	(4.00)	11.0	(4.70)	1.2	(1.60)	0.6	(1.20)

Disability Findings

Table 5.8
Medical Conditions, Disability & Accommodation by Ethnic Origin
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Hispanic	30.5	(1.10)	8.9	(0.70)	11.0	(0.80)	3.4	(0.40)	1.3	(0.30)
Non-Hispanic	36.6	(0.40)	7.9	(0.20)	12.8	(0.30)	4.1	(0.20)	2.2	(0.10)
NA	33.2	(1.30)	8.9	(0.80)	11.3	(0.90)	3.8	(0.50)	1.8	(0.40)

Table 5.9
Medical Conditions, Disability & Accommodation by Race
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Native Amer.	34.7	(4.50)	11.7	(3.00)	15.9	(3.40)	5.5	(2.10)	2.0	(1.30)
Asian	21.3	(1.30)	7.5	(0.80)	9.2	(0.90)	2.5	(0.50)	1.1	(0.30)
Black	34.9	(1.10)	7.0	(0.60)	9.9	(0.70)	3.1	(0.40)	1.6	(0.30)
Pacific Island	33.9	(3.50)	11.8	(2.40)	13.1	(2.50)	5.3	(1.70)	2.4	(1.10)
White	38.9	(0.50)	8.5	(0.30)	14.0	(0.40)	4.6	(0.20)	2.4	(0.20)
NA	29.3	(1.50)	8.4	(0.90)	10.5	(1.00)	3.0	(0.60)	1.2	(0.40)

Tables 5.8 and 5.9 show that non-whites and Hispanics are significantly less likely to have medical conditions, but whether these conditions are disabling is mixed. Hispanics are more likely to be disabled due to a current job limitation (though not at a significant level), and are much less likely to have an accommodation for that disability. African Americans are least likely to have a current job limitation disability (7.0 percent), followed by Asians (7.5 percent) and then Whites (8.5 percent).

Native Americans and Pacific Islanders have the highest rates of disabilities (11.7 percent and 11.8 percent respectively), though the differences are not statistically significant due to the small number of individuals in these latter categories. Asians have the lowest rate of disability with accommodation (1.1 percent), followed by African Americans (1.6 percent) and then Whites. The values for Native Americans and Pacific Islanders, though higher, must be interpreted cautiously due to their wide confidence bands.

Disability Findings

Table 5.10
Medical Conditions, Disability & Accommodation by Marital Status
 (+/-2 Confidence Intervals Shown in Parentheses)

Group	Has A Condition	plus/minus	Current Work Limitation Disabled	plus/minus	Disabled Under ADA	plus/minus	Uses an Accommodation	plus/minus	Disabled With an Accommodation	plus/minus
Divorced	42.9	(1.50)	9.3	(0.90)	15.4	(1.10)	5.1	(0.70)	2.8	(0.50)
Married	35.2	(0.60)	8.4	(0.40)	12.3	(0.40)	3.9	(0.20)	2.0	(0.20)
Oth Mrtl	42.3	(6.10)	13.5	(4.20)	16.2	(4.60)	6.9	(3.10)	2.7	(2.00)
Separated	39.2	(2.80)	8.5	(1.60)	12.7	(1.90)	4.4	(1.20)	2.1	(0.80)
Single	30.9	(0.70)	7.4	(0.40)	11.1	(0.50)	3.4	(0.30)	1.7	(0.20)
Widowed	50.4	(3.80)	8.3	(2.10)	13.8	(2.60)	4.5	(1.60)	1.6	(1.00)
NA	34.0	(7.40)	9.9	(4.70)	11.1	(4.90)	3.7	(3.00)	1.9	(2.10)

Table 5.10 presents the relationship between marital status and disability. Consistent with national data, single individuals are least likely to be disabled (7.4 percent). This has less to do with marriage than the fact that single people tend to be younger, and youth is correlated with a lower incidence of disability (see below). Married and widowed individuals are disabled at about the overall average rate (8.0 percent). From the demographic section above, we know nearly one-half of all employees are married, so they constitute a significant portion of the overall figure. The figure for widows is lower than would be expected given that such individuals tend to be older,

but given the wide confidence band (+/- 2.1 percent), this may simply be due a quirk in the sample. Again, consistent with national and statewide data, divorced individuals have higher rates of disability (9.3 percent). The figures for disability with accommodation are consistent with the general marital disability numbers. Rates for single individuals are on the low side, married workers are right at the overall casino average, and rates for divorced individuals are significantly above the mean. The other figures have insufficiently tight confidence intervals to provide reliable conclusions.

Table 5.11
Medical Conditions, Disability & Accommodation by Age Groups
 (+/-2s Confidence Intervals Shown in Parentheses)

Group	Has A Condition	plus/minus	Current Work Limitation Disabled	plus/minus	Disabled Under ADA	plus/minus	Uses an Accommodation	plus/minus	Disabled With an Accommodation	plus/minus
Under 21	19.4	(2.60)	4.0	(1.30)	6.2	(1.60)	1.9	(0.90)	1.0	(0.70)
21-25	22.9	(1.40)	5.8	(0.80)	8.2	(0.90)	2.5	(0.50)	1.0	(0.30)
26-30	24.6	(1.20)	6.0	(0.70)	8.7	(0.80)	2.7	(0.50)	1.2	(0.30)
31-35	28.6	(1.10)	7.9	(0.70)	11.2	(0.80)	3.3	(0.40)	1.7	(0.30)
36-40	33.2	(1.10)	9.2	(0.70)	13.4	(0.80)	4.1	(0.50)	2.2	(0.40)
41-45	38.0	(1.30)	9.8	(0.80)	14.5	(1.00)	4.7	(0.60)	2.8	(0.50)
46-50	45.2	(1.70)	9.4	(1.00)	16.0	(1.20)	4.6	(0.70)	2.5	(0.50)
51-55	48.3	(2.00)	9.1	(1.20)	14.3	(1.40)	4.6	(0.80)	2.3	(0.60)
56-60	56.7	(2.40)	10.1	(1.50)	16.4	(1.80)	6.2	(1.20)	2.6	(0.80)
61-65	55.6	(3.20)	9.1	(1.80)	13.8	(2.20)	5.1	(1.40)	2.5	(1.00)
Over 65	59.9	(4.00)	7.6	(2.20)	12.0	(2.60)	7.2	(2.10)	2.7	(1.30)
NA	32.3	(9.40)	8.1	(5.50)	11.1	(6.30)	3.0	(3.40)	1.0	(2.00)

Disability Findings

Table 5.11 shows quite dramatically the relationship between age, medical conditions and disability. Medical conditions climb rapidly and consistently as age increases, from 19 percent for those under 21 years to 60 percent for those over 65. Disability climbs from 4 percent for those under 21 years to 8 percent for those aged 31-35 years, and then to about 9.5 percent for those aged 36-50. It tops out at 10 percent for those age 56-60 years before beginning to fall off for older individuals, these figures at the upper end of the spectrum have less precision and must be taken with appropriate caution.

The fact that disability rates move up consistently as age increases until it tops out for 55-60 year-olds and then declines thereafter is worthy of further discussion. For individuals in the 61-65, and 65 and over age groups, the prevalence of disability is greater than for those under 35 years of age, but is lower than for those aged 36-60. This seems somewhat illogical and appears to be in conflict with what is generally known about the disabled population until we recall that we are dealing with an **employed** population.

Most persons with disabilities do not work. In national surveys, which include both employed and unemployed individuals, disability rates consistently climb with age, while disabled **employment** declines with age. Our data are thus consistent with these findings in that the probability of being a disabled casino employee for those aged 60 and above falls because older individuals opt for retirement in greater numbers in response to disabling conditions. In this sense such individuals are no less disabled; they are simply no longer employees. They are thus not included of our data even though they would be included in national household level data. This interpretation is bolstered by the fact that the prevalence of **potentially** disabling medical conditions does increase steadily for our data, even through the upper age groups. It is just that when these conditions become disabling, older workers tend to retire.

Disabilities under the broader ADA consistent definition follow essentially the same pattern, but have a wider variation of values. Disability consistent with the ADA range from just over 6 percent for those under 21 years to more than 16 percent for those in the

46-50 group. Disabilities for those using accommodations follows the same pattern, rising from just 1 percent for those under 21 years to nearly 3 percent for those in the 41-45 age group, and holding at about 2.5 for those in the broader 36 years and over age groups.

Medical conditions, disability and accommodation rates according to years with the current employer (tenure) are shown in Table 5.12. Given the close correlation between age and tenure, it is not surprising that the figures follow the same basic pattern as is seen in the age table. Those with less than three years of service with the casino have a disability rate of 6 percent, while those with 12 or more years have a disability rate of about 10.5 percent. This same pattern holds for the ADA-defined disability definition and for disabilities with associated accommodations.

Education is also known to be closely tied to disability. Generally, all else equal, as an individual's level of education increases, the incidence of disability decreases. This results primarily from two factors. First, as education increases, the nature of an individual's work transitions from manual labor that tends to be hard on one's body, to more cerebral types of work that, while often more stressful, tend to be less associated with the kinds of injuries and illnesses that lead to disability. In addition, as education increases, so does the range of occupational choice. This implies that more educated individuals have more opportunity to leave or modify jobs that are leading along the path of disability, long before the disability becomes a fact.

The education results for the casino data are shown in Table 5.13. The expected inverse relationship between education and disability, however, appears only partially in our data. Disability rates are higher for the low end of the educational attainment scale. Those with less than a high school education (9.4 percent) are more likely to be disabled as those with completed high school, or two to four years of college, but have about the same incidence as those with a trade. And this is true despite the fact that the more educated workers have nearly the same incidence of potentially disabling medical conditions as those with less education. For example, workers with less than 12 years of completed schooling, those with a high school diploma (or GED), and those with an AA or BA degree all have medical condition incidence

Disability Findings

rates of 33-36 percent. Even though these figures for potentially disabling medical conditions are almost identical, less than 8.6 percent of those with more education have disabling limitations in their current job, while the figure is 9.4 percent for those with marginal educations. Although the trade impact seems to counter this reduced disability effect of education, it is likely being masked to a degree by occupational effects since those in the trades tend to work in somewhat more hazardous environments (see the discussion on departments below).

Table 5.12
Medical Conditions, Disability & Accommodation by Tenure Groups
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Tnr-It3	28.4	(0.80)	6.1	(0.40)	9.9	(0.50)	2.7	(0.30)	1.1	(0.20)
Tnr-3-5	32.0	(1.10)	8.5	(0.70)	11.6	(0.80)	3.7	(0.50)	1.7	(0.30)
Tnr-6-8	37.0	(1.20)	9.0	(0.70)	13.5	(0.80)	4.3	(0.50)	2.4	(0.40)
Tnr-9-11	39.0	(1.50)	8.7	(0.90)	12.8	(1.00)	4.2	(0.60)	2.2	(0.40)
Tnr-12-14	42.4	(1.70)	10.8	(1.10)	15.4	(1.30)	5.6	(0.80)	3.2	(0.60)
Tnr-15-17	45.1	(1.90)	10.4	(1.20)	15.7	(1.40)	5.1	(0.80)	2.9	(0.60)
Tnr-18-20	45.0	(2.60)	9.3	(1.50)	15.0	(1.80)	5.7	(1.20)	3.3	(0.90)
Tnr-Gt20	49.3	(11.50)	10.7	(7.10)	12.0	(7.50)	4.0	(4.50)	2.7	(3.70)
NA	34.9	(6.50)	6.5	(3.40)	8.4	(3.80)	3.3	(2.40)	0.9	(1.30)

Table 5.13
Medical Conditions, Disability & Accommodation by Education
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Edu-It12	35.4	(1.50)	9.4	(0.90)	11.4	(1.00)	3.6	(0.60)	1.5	(0.40)
Edu-HS	33.3	(0.70)	7.1	(0.40)	10.8	(0.40)	3.4	(0.30)	1.6	(0.20)
Edu-Trade	40.1	(1.60)	9.7	(1.00)	15.2	(1.20)	4.5	(0.70)	2.5	(0.50)
Edu-AA	36.1	(1.00)	8.6	(0.60)	13.3	(0.70)	4.5	(0.40)	2.4	(0.30)
Edu-BA	33.9	(1.30)	8.6	(0.80)	13.6	(1.00)	4.3	(0.60)	2.6	(0.50)
Masters	37.9	(4.40)	9.8	(2.70)	14.3	(3.20)	4.9	(1.90)	2.9	(1.50)
Doctoral	39.1	(12.20)	15.6	(9.10)	17.2	(9.40)	6.3	(6.00)	4.7	(5.30)
NA	34.2	(5.20)	7.4	(2.90)	8.3	(3.10)	1.8	(1.50)	0.0	0.00

Disability Findings

At the upper ends of educational attainment the effect of education appears to be reversed - greater educational attainment is associated with higher disability rates. Some of this may be due to the confounding influence of age, since more highly educated individuals are also likely to be older. But, as was the case with age, this “backwards” effect of education is more likely due to the fact that we are dealing with a strictly **employed** population. Greater education tends to increase one's ability to adapt to a disabling condition and become employed or remain working. It is not surprising among a disabled population that disability rates increase with education, particularly at the upper end of educational attainment. What we see then is that the disabling effect of occupations appears to dominate for those with less than 12 years of education and those with trade school degrees, while the adaptability afforded by education tends to dominate for those with more advanced investments in education.

The reversal of the education effect is stronger for an ADA style definition of disability. Those with masters and doctoral degrees are disabled at rates of 14 percent and 17 percent respectively, while for workers with less than 12 years of education the disability rate is only 11 percent. In the same way, disabilities with associated accommodations would tend to increase with education simply because jobs that can be accommodated become more plentiful as the education level of the worker increases. Similarly, employees become more valuable and employer incentives to make such accommodations increase as education increases. Further, education can allow an individual the flexibility of changing to a job in which the medical condition is no longer a factor. But this implies that there are jobs that can no longer be done as a result of the medical condition so that the individual's choice of jobs are now restricted. Similarly, using education to adjust for limitations does not necessarily change employers' general perceptions toward an individual with a condition.

In terms of equal employment opportunity (EEO) categories, there is not much variation in terms of the prevalence of conditions with the exception of the “Craft Worker” category (41.2 percent). As might be expected, the office jobs of “Office/Clerical” and

“Officials and Managers” (both 5.7 percent) and “Sales Workers” (6.7 percent) have lower than average disability rates, while the “Professionals” group, which includes dealers, has significantly higher rates (12.8 percent). This pattern holds if we use the broader definition of disability consistent with the ADA, though the office environment jobs move closer to the overall average. When we look at disability with an associated accommodation, most of the variation disappears, with the exception of “Professionals,” which is significantly above the mean value of 2.0 percent (though “Technicians” also have a higher value, the broad confidence interval implies the value is not statistically different from the mean).

When we turn to departmental comparisons, we see that the office versus line worker distinctions hold true. Departments such as “Administrative” (4.9 percent) and “MIS” (4.7 percent) have disability rates that are almost one-half the overall average, while the rate for “Table Games” is just under 12 percent. For the values that are statistically significant, this pattern remains under the ADA style disability definition, and when we combine disability with the use of an accommodation.



Disability Findings

Table 5.14
Medical Conditions, Disability & Accommodation by EEO Category
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Craft Workers	41.2	(3.60)	7.6	(1.90)	11.4	(2.30)	2.8	(1.20)	1.6	(0.90)
Laborers	33.1	(2.90)	8.9	(1.70)	10.7	(1.90)	3.6	(1.10)	0.9	(0.60)
Office/Clerical	38.6	(1.80)	5.7	(0.90)	12.6	(1.20)	4.5	(0.80)	1.8	(0.50)
Offl/Manager	36.3	(1.20)	5.7	(0.60)	11.2	(0.80)	3.1	(0.40)	1.7	(0.30)
Operatives	33.0	(2.90)	5.6	(1.40)	9.6	(1.80)	3.1	(1.10)	1.8	(0.80)
Professionals	35.2	(1.20)	12.8	(0.80)	16.6	(0.90)	5.5	(0.60)	3.7	(0.50)
Sales Worker	32.7	(1.50)	6.7	(0.80)	11.4	(1.00)	3.7	(0.60)	1.6	(0.40)
Service Work	34.2	(0.70)	8.4	(0.40)	11.4	(0.50)	3.6	(0.30)	1.6	(0.20)
Technicians	36.8	(3.30)	7.7	(1.80)	13.2	(2.30)	4.3	(1.40)	3.1	(1.20)
NA	31.3	(5.80)	7.5	(3.30)	11.1	(3.90)	4.0	(2.50)	2.0	(1.80)

Though not shown, there is no significant variation in disability by shift or employment status. Tables 5.16 and 5.17 show medical conditions, disability and accommodation incidence according reported salary and wage groups. Generally, the figures reflect the age and tenure results discussed above. Individuals with lower earnings tend to be younger and have fewer years

of service with the employer. As a result, disability incidence tends to increase as earnings increase due essentially to the underlying age factor. In the upper earnings brackets, however, occupational forces begin to overwhelm the age effects and disability rates begin to fall since individuals in the upper income ranges are largely in administrative and managerial positions.

Table 5.15
Medical Conditions, Disability & Accommodation by Department
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/	Current Work	plus/	Disabled	plus/	Uses an	plus/	Disabled	
Group	Condition	minus	Limitation	minus	Under ADA	minus	Accommodation	minus	With an	plus/
			Disabled						Accommodation	minus
Admin	35.5	(2.40)	4.9	(1.10)	12.5	(1.60)	4.2	(1.00)	1.5	(0.60)
Cashier	34.2	(1.90)	7.4	(1.10)	11.3	(1.30)	3.6	(0.80)	1.6	(0.50)
Change	33.7	(4.10)	7.8	(2.30)	13.9	(3.00)	5.0	(1.90)	2.5	(1.30)
Ent Prod	38.9	(5.60)	9.8	(3.40)	14.2	(4.00)	6.4	(2.80)	4.7	(2.50)
Enttrtnr	46.2	(19.50)	3.8	(7.50)	11.5	(12.50)	7.7	(10.40)	3.8	(7.50)
Food	32.0	(1.00)	7.2	(0.60)	10.3	(0.70)	3.1	(0.40)	1.4	(0.30)
Hotel Retail	34.4	(5.60)	8.2	(3.20)	11.7	(3.80)	2.5	(1.80)	0.4	(0.70)
Hotel Services	32.8	(1.60)	7.2	(0.90)	10.4	(1.10)	3.8	(0.70)	1.4	(0.40)
MIS	29.3	(5.10)	4.7	(2.30)	7.8	(3.00)	2.5	(1.70)	1.2	(1.20)
Maintenance	40.7	(2.60)	8.4	(1.50)	11.7	(1.70)	3.1	(0.90)	1.4	(0.60)
Other Depts	35.0	(1.40)	7.4	(0.70)	11.8	(0.90)	3.6	(0.50)	1.7	(0.40)
Security	38.2	(2.00)	6.5	(1.00)	11.4	(1.30)	3.9	(0.80)	2.0	(0.60)
Slots	36.4	(2.00)	6.8	(1.00)	11.5	(1.30)	3.5	(0.70)	1.5	(0.50)
Table	36.7	(1.00)	11.9	(0.70)	16.2	(0.80)	5.3	(0.50)	3.4	(0.40)
NA	38.9	(4.90)	9.8	(3.00)	12.2	(3.30)	2.6	(1.60)	1.3	(1.10)

Disability Findings

Table 5.16

Medical Conditions, Disability & Accommodation by Annual Salary Groups (+/-2 Confidence Intervals Shown in Parentheses)

Group	Has A Condition	plus/ minus	Current Work Limitation Disabled	plus/ minus	Disabled Under ADA	plus/ minus	Uses an Accommodation	plus/ minus	Disabled With an Accommodation	plus/ minus
Under-5k	25.8	(4.30)	6.8	(2.50)	8.9	(2.80)	5.6	(2.20)	1.9	(1.30)
5k-10k	28.3	(3.20)	7.8	(1.90)	9.9	(2.10)	3.0	(1.20)	1.8	(1.00)
10k-15k	30.5	(1.90)	7.2	(1.10)	10.5	(1.20)	3.2	(0.70)	1.5	(0.50)
15k-20k	34.7	(1.40)	8.0	(0.80)	12.2	(0.90)	3.7	(0.50)	1.7	(0.40)
20k-25k	35.5	(1.20)	7.9	(0.70)	11.5	(0.80)	3.9	(0.50)	1.8	(0.30)
25k-30k	35.4	(1.40)	8.1	(0.80)	12.3	(0.90)	3.7	(0.50)	1.7	(0.40)
30k-40k	36.4	(1.20)	10.0	(0.80)	13.9	(0.90)	4.5	(0.50)	2.7	(0.40)
40k-50k	40.3	(1.80)	8.7	(1.10)	14.8	(1.30)	4.1	(0.70)	2.5	(0.60)
50k-65k	35.1	(2.80)	5.3	(1.30)	10.8	(1.80)	3.4	(1.10)	1.7	(0.80)
65k-80k	32.4	(5.70)	4.0	(2.40)	7.7	(3.20)	3.3	(2.20)	1.5	(1.50)
80k-95k	24.7	(8.80)	1.0	(2.00)	3.1	(3.50)	1.0	(2.00)	0.0	0.00
Over-95k	33.1	(7.10)	2.3	(2.30)	8.0	(4.10)	3.4	(2.70)	2.3	(2.30)
NA	34.6	(1.10)	8.4	(0.60)	12.5	(0.80)	4.1	(0.05)	2.0	(0.30)

Table 5.17

Medical Conditions, Disability & Accommodation by Hourly Wage Groups (+/-2 Confidence Intervals Shown in Parentheses)

Group	Has A Condition	plus/ minus	Current Work Limitation Disabled	plus/ minus	Disabled Under ADA	plus/ minus	Uses an Accommodation	plus/ minus	Disabled With an Accommodation	plus/ minus
Under-\$5	24.8	(2.90)	7.9	(1.80)	11.2	(2.10)	3.9	(1.30)	2.0	(0.90)
\$5-\$7	31.5	(2.40)	10.1	(1.50)	12.9	(1.70)	5.1	(1.10)	3.4	(0.90)
\$7-\$9	31.0	(1.50)	7.7	(0.90)	11.2	(1.00)	3.2	(0.60)	1.6	(0.40)
\$9-\$13	39.1	(1.50)	9.1	(0.90)	13.5	(1.10)	4.3	(0.60)	1.7	(0.40)
\$13-\$15	40.6	(3.50)	8.0	(1.90)	12.1	(2.30)	4.6	(1.50)	2.2	(1.00)
\$15-\$20	39.0	(3.20)	9.4	(1.90)	13.6	(2.30)	4.5	(1.40)	2.3	(1.00)
\$20-\$30	43.8	(4.50)	10.1	(2.70)	15.6	(3.30)	5.8	(2.10)	3.9	(1.70)
\$30-\$40	41.7	(10.10)	5.2	(4.50)	11.5	(6.50)	4.2	(4.10)	1.0	(2.10)
\$40-\$50	42.1	(11.30)	10.5	(7.00)	14.5	(8.10)	5.3	(5.10)	0.0	0.00
Over-\$50	45.5	(10.00)	5.1	(4.40)	14.1	(7.00)	4.0	(4.00)	2.0	(2.80)
NA	35.0	(0.50)	7.9	(0.30)	12.1	(0.30)	3.8	(0.20)	2.0	(0.10)

Disability Findings

Table 5.18
Medical Conditions, Disability & Accommodation by Hourly Wage Groups
 (+/-2 Confidence Intervals Shown in Parentheses)

	Has A	plus/ minus	Current Work Limitation	plus/ minus	Disabled Under ADA	plus/ minus	Uses an Accommodation	plus/ minus	Disabled With an Accommodation	plus/ minus
Group	Condition		Disabled							
Bally's	33.8	(0.70)	7.5	(0.40)	11.5	(0.50)	4.0	(0.30)	2.0	(0.20)
Caesars	37.5	(0.80)	8.4	(0.50)	13.5	(0.60)	5.7	(0.40)	3.0	(0.30)
Claridge	37.9	(1.10)	11.1	(0.70)	15.4	(0.80)	5.1	(0.50)	3.0	(0.40)
Harrah's	40.0	(0.90)	8.3	(0.50)	11.7	(0.60)	3.9	(0.40)	1.8	(0.20)
Hilton	32.8	(0.90)	7.6	(0.50)	12.3	(0.60)	3.8	(0.40)	2.0	(0.30)
Marina	36.3	(0.90)	10.9	(0.56)	14.7	(0.70)	4.4	(0.40)	2.7	(0.30)
Plaza	34.3	(0.80)	9.6	(0.50)	13.6	(0.60)	4.0	(0.30)	1.9	(0.20)
Resorts	37.4	(1.20)	8.1	(0.70)	12.3	(0.80)	3.1	(0.40)	1.6	(0.30)
Sands	29.6	(1.20)	5.9	(0.60)	9.5	(0.70)	3.2	(0.50)	1.2	(0.30)
Showboat	33.9	(1.00)	6.8	(0.50)	10.4	(0.60)	3.4	(0.30)	1.4	(0.20)
Taj Mahal	34.8	(0.70)	8.5	(0.40)	12.9	(0.50)	3.6	(0.30)	1.8	(0.20)
Tropicana	33.4	(0.80)	6.9	(0.40)	10.9	(0.50)	3.1	(0.30)	1.7	(0.20)
Trump TCS	26.9	(4.30)	2.7	(1.60)	5.4	(2.20)	0.5	(0.70)	0.0	0.00

What we see then from this examination of the demographics of disability at the casinos is that disability varies in predictable ways. More importantly, however, we see that even as we look at disability variation in a single demographic context, other confounding factors are operating in the background and are influencing what we see.

We now turn to a multivariate approach to examining these multiple factors that will enable us to hold each of the relevant background factors constant as we look at the effects of the key variables influencing disability at the casinos. It is through this multivariate analysis that we will finally be able to isolate the employment policy impact of disability employment at the various casinos.

HOW THE CASINOS COMPARE IN THEIR EMPLOYMENT OF PERSONS WITH DISABILITIES

Our objective in this Chapter is to compare casinos in terms of their employment of persons with disabilities. We compare each casino's performance in relation to the average casino, which happens to be Resorts. Our results are shown in Figure 6.1.

- ◆ Caesars, Harrah's, Hilton and Taj Mahal are near the average.
- ◆ Claridge, Marina, and Trump Plaza do significantly better in the proportion of employees who are disabled.
- ◆ The remaining casinos do not come up to the average. Hilton, Sands, Showboat, Tropicana, and Trump Casino Services employ a smaller percentage of disabled persons than does Resorts.

These rankings, in terms of at the average, better than the average or worse than the average, do not change whether we consider the unadjusted differences (black bar) or the adjusted differences (gray bar). Yet we know that if the object is to discuss the independent effect of the casino's action in regard to the employment of persons with disabilities, we should adjust for the now well-known fact that age, education, gender, race and Hispanic/non-Hispanic status influence disability rates. We make the adjustment for these other factors in this Chapter.

The Influence of Demographics

Employers with differing employee demographic profiles would be expected to have differing proportions of disabled employees strictly as an artifact of such differences in their demographic composition. Such differences would be expected in the absence of differences in the disability-related employment practices of the casinos. For example, two casinos that

are identical, except that one has a mean employee age that is higher than the other, would be expected to have different numbers of disabled employees as a direct result of these age distinctions. Since disability rates rise as the age of an employee population increases, the casino with the higher mean employee age would be expected to have a larger disabled employee population. Thus to determine if there are meaningful differences in the disability related employment practices of the casinos, it is necessary to control for these other factors.

In Chapter V, (Table 5.18) we showed the medical conditions, disability and accommodation prevalence at each of the Atlantic City casinos. Harrah's has the highest prevalence of medical conditions at 40 percent, while Trump Casino Services has the lowest at 27 percent. The other casinos are scattered between these figures. In terms of disability, it is Claridge and Marina with the highest rates (11 percent), and Sands and Trump Casino Services with the lowest rates at 6 and 3 percent, respectively.

This same pattern holds if we broaden the disability definition to one in keeping with the ADA. Claridge (15.4 percent) and Marina (14.7 percent) have the highest rates, while Sands (9.5 percent) and Trump Casino Services (5.4 percent) have the lowest. Adding accommodation to the disability definition, Caesars (3.0 percent) joins Claridge (3.0 percent) and Marina (2.7 percent) at the top end, and Sands and Trump Casino Services remain at the low end.

When we examine differences in medical conditions and disability rates for the various casinos, some of the differences are accounted for by demographic factors. Resorts, for example, has an employee population that is notably older than the average of the other casinos. As a result, we would expect Resorts to have higher than average rates of medical conditions and disability due to these age effects.

As it turns out, Resorts has one of the higher rates of medical conditions among all of the casinos. Despite this older population, however, the Resorts disability rate is right at the average for all of the casinos. This high rate of medical conditions combined with an average rate of disability may be explained by the fact that education levels at Resorts are slightly above the average levels of the remaining casinos. We noted above that higher education levels

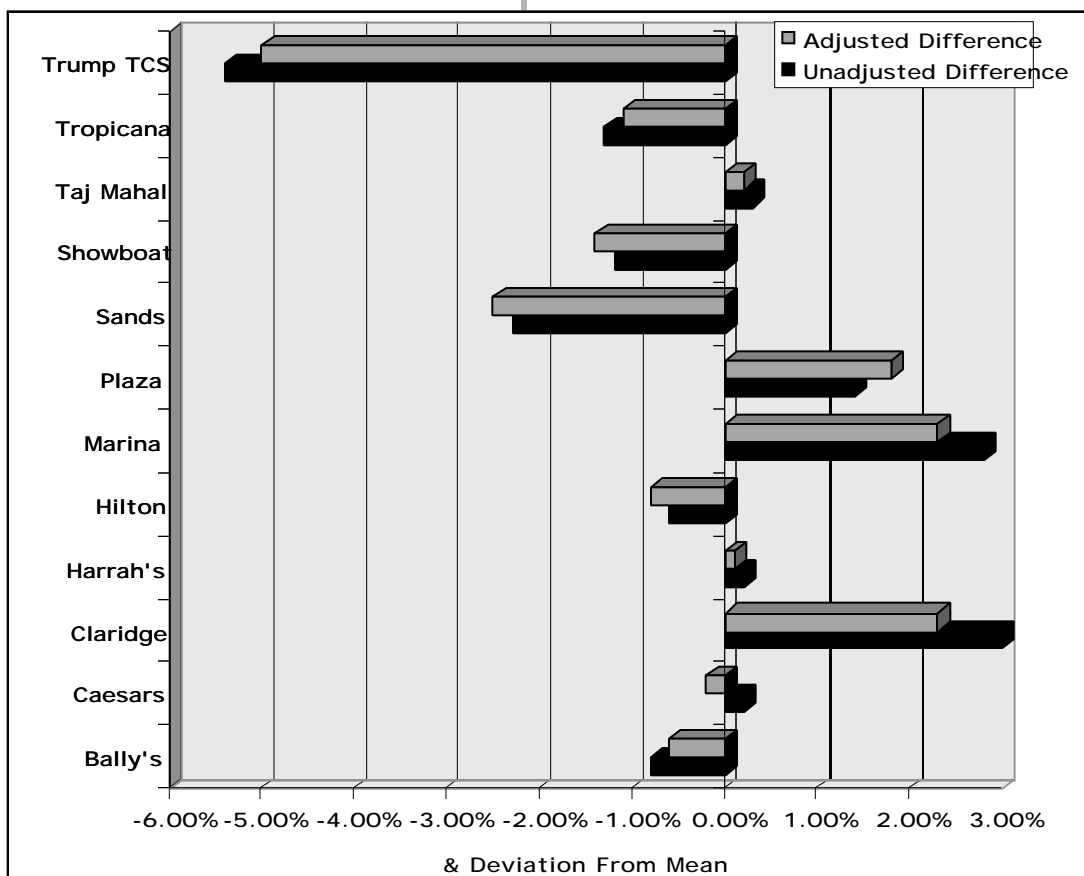
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are correlated with lower disability rates. Similarly, we can point to other aspects of the demographic composition of the casinos and discuss the extent to which these characteristics might be influencing the disability composition of each casino.

The problem that we encounter, as the Resorts example illustrates, is that when we simply look at the disability rate by casino, we are not holding the other relevant disability-employment related characteristics constant, and these other characteristics may have a confounding effect.

One way around this problem is to look at cross tabulations of disabilities, by casino, by demographics. Appendix D shows these tables. This cross tabulation method helps explain the variation among casinos, but we are still left with the problems of confounding influences that we found when we examined the demographics of disability (Chapter IV). In addition, as the confidence intervals in the Appendix tables indicate, as soon as we begin slicing the data in multiple ways, the groups of individuals in any one "cell" becomes exceedingly small. As a result, the statistical significance of the prevalence rates falls off rapidly, and we are left with estimated values in which we have only marginal confidence.

Figure 6.1
Unadjusted & Adjusted Disability Employment
Deviations from the Casino Average



A Probit Model

Fortunately, the effects of demographic and employment policy characteristics can be isolated through binary choice multivariate statistical models. For our purposes, a probit model is well suited to isolating general characteristics which influence the likelihood that a given employee will, or will not, be disabled. This model essentially estimates the marginal effect of each characteristic while holding the array of other variables constant. Based on our previous discussion, the key variables that we must control for are gender, age and level of education. The likelihood of disability is greater for women, older individuals and those with less education.

In this respect, our data are entirely consistent with that of other surveys such as the New Jersey Demographics of Disability Survey (NJDDS), the National Health Interview Survey (NHIS), the Survey of Income and Program Participation (SIPP) and the Current Population Survey (CPS).

Our probit model thus posits that whether employees are disabled or not depends on these key factors as well as their marital status, type of work, and whether they are of Hispanic descent or not. Each of these variables enter the probit model as dichotomous “dummy” variables equal to one if the individual is in the category or sub-category, and zero otherwise. The most important set of variables for our purposes identifies differences in disability rates among the casinos that are not explained by these demographic characteristics. These variables enter the probit as dummy variables for each of the casinos. This model and the results obtained are presented in Table 6.1.

The dependent variable is disabled due to a work limitation in the current job among casino employees. The values given are relative to an average individual from the excluded reference category for each variable or variable group.⁵ Thus male casino employees are 1.6 percent less likely to be disabled than female casino employees when all of their other factors are the same (they are from the same casino, are in the same age and education groups, do similar

types of work and have the same married/unmarried marital status and the same Hispanic/non-Hispanic ethnic status). Another way of interpreting this is to say that if all employees were male, we would expect the disability rate to be 1.6 percent lower than if all casino employees were female. These results tell us the independent effect of each of the groups of variables listed, holding all of the other variables constant.

As we would have suspected from our examination of demographics, (Chapter IV), Hispanic casino employees are more likely than non-Hispanics (by 1.7 percent) to be working with a medical condition that limits them in their current job. Married employees are only slightly less likely (0.3 percent) to be disabled, according to this definition. To simplify the analysis, we consider only three occupational groups: those with office jobs (Administration or MIS Department), those who work in table games, and everyone else. We do this to account for pertinent differences in the occupational make-up of the casinos. Trump Casino Services, for example, is largely an office operation, while the Trump Plaza casino has a much smaller proportion of dealers than does the average casino. As we have shown, disability tends to vary according to these occupational groups, so failing to account for these differences in the occupational make-up of the casinos would tend to bias the results. Holding the other variables constant, we see that working in table games implies a 4.1 percent higher probability of disability, and working in an administrative or MIS position implies a 2.9 percent lower probability of disability as compared to other types of workers.

⁵By “excluded” we mean those categories of individuals not specified in the model. For gender, males are specified and so females are the reference group. The remaining reference groups are non-Hispanic, not married, working in departments other than table games, administration or MIS (an office environment), educational attainment of a high school diploma or GED, under 21 years of age and working for Resorts.

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Table 6.1
Probit Multivariate Analysis Results

Variable	Parameter Estimate	Sample Mean	Estimated Mean Value	Effect ($i+$)*	Significance*
Intercpt	-1.7891	1	-1.7891	P	
Male	-0.107	0.5252	-0.0562	-0.0155	☆
Hispanic	-0.1196	0.1708	0.0204	0.0174	☆
Married	-0.0197	0.4688	-0.0092	-0.0029	
Table	0.2817	0.2241	0.0631	0.0409	☆
Office	-0.1977	0.0583	-0.0115	-0.0287	☆
Edu-LT12	0.1499	0.1224	0.0184	0.0218	☆
Edu-Trade	0.2042	0.114	0.0233	0.0296	☆
Edu-AA	0.0988	0.2229	0.022	0.0143	☆
Edu-BA	0.1188	0.1342	0.0159	0.0172	☆
Masters	0.1749	0.0146	0.0026	0.0254	☆☆
Doctoral	0.4413	0.0019	0.0008	0.064	☆☆
Age 21-25	0.1099	0.0992	0.0109	0.016	
Age 26-30	0.1188	0.1314	0.0156	0.0172	
Age 31-35	0.2594	0.1662	0.0431	0.0376	☆
Age 36-40	0.3424	0.1748	0.0598	0.0497	☆
Age 41-45	0.3775	0.1397	0.0527	0.0548	☆
Age 46-50	0.3635	0.099	0.036	0.0528	☆
Age 51-55	0.37	0.069	0.0255	0.0537	☆
Age 56-60	0.4398	0.0464	0.0204	0.0638	☆
Age 61-65	0.3845	0.028	0.0107	0.0558	☆
Over 65	0.3224	0.0175	0.0056	0.0468	☆
Bally's	-0.0396	0.1209	-0.0048	-0.57%	
Caesars	-0.0096	0.0889	-0.0009	-0.14%	
Claridge	0.1566	0.0524	0.0082	2.27%	☆
Harrah's	-0.0009	0.0827	-0.0001	-0.01%	
Hilton	-0.0534	0.078	-0.0042	-0.77%	
Marina	0.1519	0.0712	0.0108	2.20%	☆
Plaza	0.1121	0.0935	0.0105	1.62%	☆☆
Sands	-0.1628	0.0566	-0.0092	-2.36%	☆
Showboat	-0.0948	0.0721	-0.0068	-1.37%	☆☆☆
Taj Mahal	0.013	0.1078	0.0014	0.19%	
Tropicana	-0.0794	0.1036	-0.0082	-1.15%	
Trump TCS	-0.3466	0.0055	-0.0019	-5.02%	☆☆☆

*

☆ Indicates significant at the 99 percent level

☆☆ Indicates significant at the 95 percent level

☆☆☆ Indicates significant at the 90 percent level

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The age effect is exactly what we would expect to see in that the older employees are, the more likely it is that they will be disabled - that is, until the retirement effects kicks in for the top age groups. Workers aged 21 to 25 are just 1.6 percent more likely to have a current job limiting medical condition than those under 21 years of age, while those aged 56 to 60 are 6.4 percent more likely to be disabled. Just as was the case in the disability and education (Table 5.13), moving up through age groups consistently increases the likelihood of disability until we reach the 61-65 and 65 and over groups. For individuals in these upper groups, the likelihood of disability is greater than for those under 21 years by 5.6 percent and 4.7 percent respectively, but the likelihood of disability is lower than those aged 56-60. Again, this stems from the fact that we are dealing with an employed population. The declining probability of being a disabled casino employee for those aged 60 and above results from older individuals increasingly opting for retirement in response to disabling conditions.

The fact that we are dealing with an employed population is even more striking when we look at the education variables. By holding the other demographic effects constant, the flexibility impact of education becomes more pronounced. When compared to those with a high school diploma or GED, employees with two years of college are 1.4 percent more likely to disabled. This figure increases to 1.7 percent and 2.5 percent for employees with bachelors and masters degrees respectively, and employees with doctorate degrees, as a group, are 6.4 percent more likely to have a disabling medical condition that limits them in their current job. Again, since we know that the rate of medical conditions is not affected by education, we interpret this to mean that far greater proportions of individuals with disabilities are able to adapt and continue working as their level of education increases.

Making the Probit Adjustments

We now turn to an examination of these results for the different casinos. Having controlled for the various demographic effects on disability prevalence,

the probit figures shown for the casinos indicate the impact of casino policies on the prevalence of disabled employees in each casino's workforce. Recall that the figures are relative to the 8.1 percent disability prevalence rate at Resorts, a figure just 0.1 percent below the overall average. These numbers can therefore be interpreted as the deviation from the average that is due to casino employment policies. These deviations from the average (the Resorts rate of 8.1 percent) are shown in Table 6.2, both before and after we adjust for demographic composition.

Table 6.2
**Effect of Adjusting for Demographic
Differences in Casinos***

Casino	Unadjusted Difference	Adjusted Difference	Impact of Adjustment
Bally's	-0.65%	-0.57%	0.08%
Caesars	0.30%	-0.14%	-0.44%
Claridge	2.94%	2.27%	-0.68%
Harrah's	0.17%	-0.01%	-0.18%
Hilton	-0.56%	-0.77%	-0.21%
Marina	2.74%	2.20%	-0.55%
Plaza	1.42%	1.62%	0.20%
Sands	-2.26%	-2.36%	-0.10%
Showboat	-1.30%	-1.37%	-0.07%
Taj Mahal	0.35%	0.19%	-0.16%
Tropicana	-1.25%	-1.15%	0.10%
Trump TCS	-5.45%	-5.02%	0.44%

*Figures shown are relative to the disability employment rate at Resorts, which is 8.1 percent. The overall average is 8.2 percent.

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Harrah's, Caesars and Taj Mahal all had disability figures that were close to the average of 8.2 percent, so it is not surprising that their results show little deviation from the mean once we adjust for differences in demographic composition. The adjusted deviations above the mean at these casinos are 0.2 percent, 0.3 percent and 0.4 percent, respectively. In each case, adjusting for demographic characteristics does have an impact. This change is less than 0.2 percent for Harrah's and Taj Mahal, but is fairly large for Caesars. At Caesars, the deviation from the mean prior to adjusting for demographics is 0.3 percent above the mean, while after the adjustment it is 0.1 percent below the mean. This implies a reduction (indicated by the negative sign) in the effect of employment policies on disability of 0.4 percent as a result of demographic considerations.

The adjusted casino effect for Bally's and Hilton indicate that workers at those casinos are 0.6 and 0.8 percent less likely to be disabled than is the case on average. Showboat and Tropicana come in significantly below the average, with employees at Tropicana 1.2 percent less likely to be disabled and those at Showboat 1.4 percent behind the average. Employees at Sands are least likely of all workers in Atlantic City's gaming operations to be working with a disabling medical condition. The adjusted probability of an employee at Sands being disabled is 2.4 percent below the overall casino average. In each case, these adjusted figures represent only a relatively small change from the unadjusted deviations.

Employees with Trump Casino Services have the lowest probability of being disabled over all casino subgroups analyzed. Even after we adjust for the effects of their less hazardous working environment, the overall higher level of education among their employees, and the other demographics cited, Trump Casino Services employees have a 5.0 percent smaller chance of being disabled than the average employee within the casino industries. Adjusting for demographic characteristics reduces the deviation below the mean for Trump Casino Services by just under one-half of one percent, from -5.45 for the unadjusted deviation to -5.02 for the adjusted figure.

Other casinos are doing far better in terms of hiring and retaining disabled workers. The adjusted figures indicate that employees at Trump's Plaza are 1.6 percent more likely to be employed with a disability than is the case for the average casino employee,

and those at Marina are 2.2 percent more likely to be disabled and employed. Claridge has the best disability results in that its employees enjoy a 2.5 percent higher probability of being disabled and working than an employee of the reference casino Resorts, once we have adjusted for the impact of relevant demographic characteristics.

Claridge is also the casino most affected by adjusting for demographic composition. If we do not adjust for demographics, the disability employment rate at Claridge is 2.9 above the mean. Once we do adjust for demographics, this figure drops nearly 0.7 percent to 2.3 percent. What this means is that the combination of demographic factors at Claridge implies that in the absence of any difference between their employment policies and those of Resorts, we would still expect there to be a difference in disability employment levels, and the expected levels at Claridge would be expected to be 0.7 percent higher strictly as a function of these demographic characteristics. Once we adjust for these differences that can be explained by demographics, we are left with a 2.3 percent difference that we attribute to positive differences in the employment environment at Claridge as compared to the average for the casino industry.

The way in which the demographic characteristics adjust the disabled employment figures for the deviation from the mean is complex. In general it is difficult to sort out how individual demographic factors are affecting the results since the total adjusted effect is a combination of factors.

In some cases, differences in the age distributions would appear to be the main driving force behind the adjustment. Bally's, Tropicana and Plaza, have the youngest distributions of employees each with about 29 percent of their workforce under the age of 30, as compared to the average of 25.6 percent. Resorts has a significantly older workforce than these other casinos, so each would be expected to have smaller disabled populations if there were no differences in the other demographic factors or the employment environment among the casinos. Bally's and Tropicana both have lower disability rates than the average (Resorts), but part of this is attributable to their younger workforce. As a result, when we

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account of demographic differences, the adjusted degree to which each of these casinos is below the mean as a result of casino employment policy attributes is reduced. This reduction is from -0.65 to -0.57 in the case of Bally's (a 0.08 percent improvement), and from -1.25 to -1.15 in the case of Tropicana (a 0.1 percent improvement).

For Plaza, before the adjustment their disability employment deviation above the mean is 1.42 percent. Based on their younger workforce alone, however, we would expect their disability rate to be below the mean. This implies that the impact of disability related employment policies at the Plaza are actually having a greater effect than is indicated by the simple deviation and the employment related policies at Plaza should be given more credit for the difference. The figure for the adjusted deviation from the mean reflects this by increasing their deviation above the mean by 0.2 percent, from 1.42 percent to 1.62 percent.

Table 6.3
Estimated Change in Disability Employment
if All Casinos Do as Well as Best Casino (Claridge)
(Estimates Adjusted to Obtain Actual Claridge Percent Disabled)**

	Actual			Expected % Disabled	Estimated Under Best Practices			
	Number of Employees	% Disabled	# Disabled		Expected # Disabled	Expected Additional Disabled	Percentage Point Improvement	Percent Change
				(i +)				
Bally's	5,480	7.50%	411	10.80%	591	180	3.30%	43.90%
Caesars	3,786	8.40%	320	11.30%	427	108	2.80%	33.70%
Claridge	2,326	11.10%	258	11.10%	258	0	0.00%	0.00%
Harrah's	3,587	8.30%	298	11.00%	396	98	2.70%	32.70%
Hilton	3,428	7.60%	260	11.10%	380	120	3.50%	46.10%
Marina	3,081	10.90%	335	11.10%	342	7	0.20%	2.10%
Plaza	4,191	9.60%	401	10.40%	437	36	0.90%	9.00%
Resorts	3,493	8.10%	284	10.90%	382	98	2.80%	34.40%
Sands	2,790	5.90%	164	10.70%	300	135	4.90%	82.50%
Showboat	3,244	6.80%	222	10.90%	355	133	4.10%	59.90%
Taj Mahal	4,693	8.50%	398	11.10%	522	123	2.60%	30.90%
Tropicana	4,737	6.90%	327	10.70%	505	178	3.80%	54.60%
Trump TCS	327	2.70%	9	7.90%	26	17	5.20%	194.00%
All Casinos	45,163	8.20%	3,686	10.90%	4,919	1,233	2.70%	33.50%

**Using the probit parameters, the estimated disabled employment values for Claridge and Marina, assuming Claridge practices, is less than the actual disabled employment at these casinos. In this table we adjust the parameter estimate for the impact of Claridge's policies (from 0.157 to 0.187) so that it provides the actual percent disabled at Claridge. We then use this adjusted figure along with remaining probit estimated parameters for the demographic effects.

*See footnote in text.

How Might Improved Policies Affect Disability Employment?

The next logical question to ask is how much difference it would make if all of the casinos were brought up to the level of success enjoyed by Claridge. Again, since the casinos do differ in their demographic make-up, we cannot simply say that each of the casinos would have disability employment rates of 11.1 percent if their policies were as successful as those of Claridge. Rather, we must utilize the parameter estimates of the probit analysis to account for these differences and estimate how Claridge's level of success would likely be expressed at the other casinos.⁶

Table 6.3 utilizes the parameter estimates of the probit analysis above to estimate the expected impact of bringing all of the casinos in line with the disability employment performance of Claridge. For comparative purposes, the first three columns indicate the current disability employment situation at each of the casinos, and for the industry as a whole. The fourth column of the table shows what the expected disability percentage would be at each casino if the "best practices" of Claridge were successfully implemented. The last four columns of the table show how these changes would affect the employment of persons with disabilities at the casinos.

Based on these demographics adjusted figures for "Expected Percent Disabled" (column 4), three additional casinos would, in fact, end up with the same 11.1 percent as is seen at Claridge. It is also interesting to note that the "best practices" rate at Caesars (11.3 percent) would be expected to exceed that of Claridge, and the rate for Trump Casino Services would still be considerably smaller (7.9 percent).

In terms of sheer numbers, the greatest change would be at Bally's. This owes more to the size of their overall workforce than to the degree to which they lag behind Claridge in disability employment. The last column incorporates these differences in absolute size and indicates the degree to which employment of persons with disabilities at each casino lags behind the disability employment prevalence at Claridge.

Disability employment at Trump Casino Services would need to increase by nearly 200 percent

to be brought in line with the success at Claridge. This figure, however, implies an increase in disability employment of only 17 individuals. Among the casinos per se, Sands, Showboat and Tropicana would need to make significant increases in disability employment to achieve parity with Claridge. Sands would need to increase disability employment by 83 percent, and Showboat and Tropicana would need to bring their numbers up by 60 percent and 55 percent respectively. At the other end of the spectrum, only Marina and Plaza are already employing persons with disabilities at levels that are nearly on par with the proportions found at Claridge. Plaza lags only 9 percent behind Claridge, while the figure for Marina is a mere 2 percent. The lag at the remaining casinos ranges from a low of 31 percent at Taj Mahal, to 44 percent at Bally's.

Overall, Table 6.3 indicates that if all of the Atlantic City casinos were employing persons with disabilities as well as the most successful casino, disability employment in the industry would grow by 34 percent, from 8.2 percent to 10.9 percent. This analysis also shows that such changes could be expected to lead to the employment of an additional 1,233 persons with disabilities.

Certainly these figures assume that what is being done at Claridge is transferable to the other casinos, and this may in fact not be the case. Despite this, it would seem that Claridge must be doing some things right and there may be valuable lessons to be learned from their policies and practices. A better understanding of these policies and practices at Claridge is needed before the degree of success transferability of their success can be ascertained. Given that the adjusted figures for Marina, and to a lesser degree, Plaza, are significantly above average as well, we would want to look for similarities in the approaches of these casinos.

An in-depth look at policies in this light would, thus, provide a better sense of what the other casinos, and other employers in general, might do to provide better opportunities to individuals with disabilities who want to work. It is in this sense that the data and analysis of this chapter are most useful. It shows that we can account for significant differ-

ences in employment populations and determine useful relationships between employers. And based on these relationships we can identify those employers who might be expected to provide the most useful insights in forwarding the employment opportunities of individuals with disabilities.

⁶Essentially, what we do is multiply the probit parameter estimates for the effect of the various demographic characteristics (vector β), by the casino specific mean values for each of these variables (\bar{x}_i , where i is the individual casino), and substitute Claridge's POLICY IMPACT parameter estimate (β) for each individual casino's parameter. This gives us the scalar, ($\beta' \bar{x}_i$) and the standard normal cumulative distribution function (Φ), of this value gives us the expected disability employment probability for each casino based on their current demographics and Claridge's POLICY IMPACT effect. If we use Claridge parameter estimate "as is," we obtain a slightly smaller estimated disability employment that is in fact the case. Adjusting this value to make it "fit" the known disability rate, changes the parameter value from 0.157 to 0.187, which we believe more accurately reflects the true policy impact. In symbols, this gives us ($\beta' \bar{x}_i + 0.187$) as the estimated disability employment probability for casino i .

Keeping Results Current

The results of the survey give a reliable picture of the number of disabled persons at work at the casinos at the time of the survey. From the inception of this project, the Casino Control Commission expressed an interest in devising some method to keep the results current and up to date.

Under our agreement with the Commission, we agreed that the final report should include, in addition to the data identifying the percentage of persons with disabilities employed by each casino licensee and an analysis of the data,

a survey instrument and methodology that will permit the Commission, in a cost effective manner and without the assistance of a statistical research consultant, to keep the survey data current on a periodic basis.

In this chapter, we present a method for accomplishing this objective. Our proposal is to use the current survey form with minor modifications, to survey, periodically, a randomly selected sample of casino employees. Before elaborating on this suggestion, we briefly discuss alternative methods that have been discussed to discover the number of persons with disabilities working at the casinos.

Alternatives to a Sample Survey

Inevitably, whenever the notion of updating the results is discussed, the matter of keeping the results current by gathering data on hires and exits comes up for discussion. We do not believe that such a method is either feasible or desirable for a number of reasons. We believe that there are legal, human resource and practical reasons not to resort to such interviews.

The legal reasons are obvious. Under the Americans with Disabilities Act, the employer is well advised not to ask employees about their disability status. In order to prevent possible cases of discrimi-

nation against employees because of their disabilities, the employer is not to ask employees about their medical conditions except under specified conditions. But, even apart from any legal considerations, there are good human resources reasons for not broaching this subject, especially at times of hiring and exit. The employer wants to consider the suitability of the employee for the job at hand and not on the basis of the person's supposed capabilities based on a medical diagnosis. Asking questions about disability status at time of hiring tends to begin the employment relationship on a negative and suspicious note. Asking such questions at the time of exit simply invites consideration of suits for wrongful discharge on the grounds of discrimination. And, there are practical considerations that interfere with the reliability of the method in an industry with thousands of employees and relatively high turnover in some occupations. It would be extremely difficult to keep track of the number of persons with disabilities by interviewing those who enter and those who leave, even if it were desirable to do so and even if it were permissible on legal grounds.

Another suggestion that surfaces each time that the matter of counting the number of persons with disabilities arises is to simply have supervisors identify the number of persons with disabilities. Even with the most perceptive of supervisors, such a count would be confined to persons with "identifiable" or "visible" impairments. Persons who use wheelchairs and persons who are totally blind would be identified, but persons with the so-called "invisible" disabilities would be missed. Persons with grave diseases such as cancer and severe heart problems would not be counted.

Disability is Different

Disability, whatever it is, is not like gender, age, or color. Each of these attributes has its own identification problems with problems at the margins. None of them, however, has the problems associated with disability, in good part because disability is a relational concept. We consider persons disabled if they have a physical or mental impairment that inter-

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feres with their performance of a major life activity. It is the relationship between the impairment and the job that determines if a person ends up being classified as disabled or not.

The Interview Form

In the case of employees at the casinos, we operationalize this relational concept by first asking employees if they have a medical condition. We then ask those persons who have checked that they have such a medical condition, whether, as a result of that condition, they are limited in the amount or kind of activity they can perform at their jobs. It is from answers to such a question that we derive our data as to the percentage of employees with disabilities who are working at the casinos.

It is true that we go on and ask persons if they are limited in their choice of jobs or if they believe that their supervisors believe that they are disabled. We recommend keeping such additional questions that complete the concept of disability in accordance with the ADA definitions, but we also recognize that these answers affect the final results by adding only a few percentage points to the total. If there is any reason to believe that these questions interfere with an understanding of the results, they could be eliminated without affecting the comparisons among the casinos in any major fashion.

Although revisions to the form could easily be made, we recommend that the current interview schedule be used in both the English and the Spanish versions. Translations of the survey form are available in Hindi, Chinese and French and these proved to be useful guides for the employees proficient in those languages. Other translations could also be provided. In general, we found that the language problem posed few obstacles to the successful completion of the survey as attested to by the participation and response rates.

If it is decided to have a new form and not to use the current printed forms, some minor changes might be made. We believe there was some confusion

in interpreting the questions that were asked about "experience." The questions could be revised so as to ask for the total years of experience working at this casino and the total years working for all employers or in self-employment since age 16.

Also, instead of asking employees to classify themselves as "full-time" or "part-time," it might be preferable to ask for the number of hours usually worked in a week.

Although the way that the form asks for information about race and national origin is technically correct, the questions proved to be confusing. It might be preferable to simply ask the Hispanic questions separately from the question about Race.

Administrative Issues

There is always a problem of some employees having difficulty understanding the questions. We recommend following the procedures used in the main survey. We found it essential to have a pre-survey publicity campaign that deals with the nature and the purpose of the survey. The pre-survey publicity seemed to help employees understand why the survey was being conducted, and helped alleviate their fears that the results would somehow be used against them.

We recommend following the procedures used in the main survey when it comes to logistics. Schedules at the casinos vary a good bit and are subject to change in accordance with business needs. The essential decisions we made, and we recommend that they be followed in the sample surveys, was to make the casinos responsible for when and where employees would meet to take the survey. Persons who will be charged with supervising and administering the survey need only have some notion of the traffic flow so that they can estimate the number of their people required at the survey site.

Under this scenario, we assume that the casinos, under instructions of the Commission, will be responsible for the pre-survey preparations, for selecting the survey location and for making sure that the employees selected for the survey appear at the survey location at the agreed-upon time. We also

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assume that the Casino Control Commission employees, or others designated by the Commission, will be responsible for handing out and collecting the survey forms and answering any questions that employees might have. We found it essential to have persons on hand when the survey was being administered to explain the survey and to answer any questions.

Selecting the Sample

Our recommendations for keeping results current are designed to be as simple as possible consistent with attaining reliable results. The first decision has to do with the sampling fraction. What percentage of the casino employees should be surveyed? The answer depends on the degree of confidence one seeks in the results.

Table 7.1A-7.1C shows the number of employee that should be surveyed in each of the casinos (based on current employment) to attain confidence intervals of one, two and 2.5 percent. Obviously the tighter the confidence intervals, the better, but for most purposes of this survey, the Commission should be able to live with a confidence interval of plus or minus 2 percent.

Table 7.1A
Sample Needed to Attain A
One Percent Confidence Interval

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:	45163	8.10%	1%	2793	6.20%
All Casinos					
Stratified:					
Harrah's	3587	8.10%	1%	1627	45.40%
Tropicana	4737	6.80%	1%	1651	34.90%
Showboat	3244	6.80%	1%	1423	43.90%
Caesars	3786	8.50%	1%	1708	45.10%
Sands	2790	5.80%	1%	1225	43.90%
Plaza	4191	9.40%	1%	1879	44.80%
Marina	3081	10.70%	1%	1706	55.40%
Claridge	2326	11.10%	1%	1464	62.90%
Bally's	5480	7.40%	1%	1827	33.30%
Hilton	3428	7.60%	1%	1544	45.00%
Resorts	3493	8.10%	1%	1607	46.00%
Taj Mahal	4693	8.40%	1%	1859	39.60%
Trump TCS	327	2.70%	1%	249	76.30%

*All samples are random and are either drawn from the full casino industry employment population without regard to casino, or are stratified by casino, where a specific random sample with the given number of observations is drawn for each casino.

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Table 7.1B
Sample Needed to Attain a 2 Percent Confidence Interval

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:					
All Casinos	45163	8.10%	2.00%	732	1.60%
Stratified:					
Harrah's	3587	8.10%	2.00%	616	17.20%
Tropicana	4737	6.80%	2.00%	559	11.80%
Showboat	3244	6.80%	2.00%	530	16.30%
Caesars	3786	8.50%	2.00%	645	17.00%
Sands	2790	5.80%	2.00%	457	16.40%
Plaza	4191	9.40%	2.00%	708	16.90%
Marina	3081	10.70%	2.00%	729	23.70%
Claridge	2326	11.10%	2.00%	693	29.80%
Bally's	5480	7.40%	2.00%	609	11.10%
Hilton	3428	7.60%	2.00%	583	17.00%
Resorts	3493	8.10%	2.00%	614	17.60%
Taj Mahal	4693	8.40%	2.00%	661	14.10%
Trump TCS	327	2.70%	2.00%	146	44.50%

Table 7.1C
Sample Needed to Attain a 2.5 Percent Confidence Interval

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:					
All Casinos	45163	8.10%	2.50%	4711	1.00%
Stratified:					
Harrah's	3587	8.10%	2.50%	421	11.70%
Tropicana	4737	6.80%	2.50%	374	7.90%
Showboat	3244	6.80%	2.50%	361	11.10%
Caesars	3786	8.50%	2.50%	440	11.60%
Sands	2790	5.80%	2.50%	311	11.10%
Plaza	4191	9.40%	2.50%	482	11.50%
Marina	3081	10.70%	2.50%	510	16.60%
Claridge	2326	11.10%	2.50%	497	21.40%
Bally's	5480	7.40%	2.50%	406	7.40%
Hilton	3428	7.60%	2.50%	397	11.60%
Resorts	3493	8.10%	2.50%	419	12.00%
Taj Mahal	4693	8.40%	2.50%	446	9.50%
Trump TCS	327	2.70%	2.50%	111	34.00%

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An alternative that has the advantage of simplicity is simply to have all casinos take a set sample, such as ten percent. If that were done, the confidence intervals for each casino, again based on current employment figures, is shown in Table 7.2A. As can be seen, the confidence intervals for the smaller casinos become rather large. Confidence intervals for a 15 and 20 percent sample are shown in Table 7.2B and 7.2C.

Table 7.2A
Confidence Interval Attained by a 10 Percent Sample

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:					
All Casinos	45163	8.10%	0.80%	4516	10.00%
Stratified:					
Harrah's	3587	8.10%	2.70%	359	10.00%
Tropicana	4737	6.80%	2.20%	474	10.00%
Showboat	3244	6.80%	2.70%	324	10.00%
Caesars	3786	8.50%	2.70%	379	10.00%
Sands	2790	5.80%	2.70%	279	10.00%
Plaza	4191	9.40%	2.70%	419	10.00%
Marina	3081	10.70%	3.30%	308	10.00%
Claridge	2326	11.10%	3.90%	233	10.00%
Bally's	5480	7.40%	2.10%	548	10.00%
Hilton	3428	7.60%	2.70%	343	10.00%
Resorts	3493	8.10%	2.80%	349	10.00%
Taj Mahal	4693	8.40%	2.40%	469	10.00%
Trump TCS	327	2.70%	5.40%	33	10.00%

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Table 7.2B
Confidence Interval Attained by a 15 Percent Sample

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:					
Stratified:					
Harrah's	3587	8.10%	2.20%	538	15.00%
Tropicana	4737	6.80%	1.70%	711	15.00%
Showboat	3244	6.80%	2.10%	487	15.00%
Caesars	3786	8.50%	2.20%	568	15.00%
Sands	2790	5.80%	2.10%	419	15.00%
Plaza	4191	9.40%	2.10%	629	15.00%
Marina	3081	10.70%	2.70%	462	15.00%
Claridge	2326	11.10%	3.10%	349	15.00%
Bally's	5480	7.40%	1.70%	822	15.00%
Hilton	3428	7.60%	2.20%	514	15.00%
Resorts	3493	8.10%	2.20%	524	15.00%
Taj Mahal	4693	8.40%	1.90%	704	15.00%
Trump TCS	327	2.70%	4.30%	49	15.00%

Table 7.2C
Confidence Interval Attained by a 20 Percent Sample

Sample*	Employee Population	Current Disability Percent	Desired Confidence Interval (+/-)	Needed Surveys	Implied Percent Sample
Non-Stratified:					
All Casinos	45163	8.10%	0.50%	9033	20.00%
Stratified:					
Harrah's	3587	8.10%	1.80%	717	20.00%
Tropicana	4737	6.80%	1.50%	947	20.00%
Showboat	3244	6.80%	1.80%	649	20.00%
Caesars	3786	8.50%	1.80%	757	20.00%
Sands	2790	5.80%	1.80%	558	20.00%
Plaza	4191	9.40%	1.80%	838	20.00%
Marina	3081	10.70%	2.20%	616	20.00%
Claridge	2326	11.10%	2.60%	465	20.00%
Bally's	5480	7.40%	1.40%	1096	20.00%
Hilton	3428	7.60%	1.80%	686	20.00%
Resorts	3493	8.10%	1.80%	699	20.00%
Taj Mahal	4693	8.40%	1.60%	939	20.00%
Trump TCS	327	2.70%	3.60%	65	20.00%

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No matter which option is chosen, the flat 10 percent sample for all casinos or the different samples in each casino to gain a similar level of confidence, the procedures would be much the same.

Each casino would be requested to produce a roster of employees and to choose, on a random basis, the indicated percentage of employees. The names of the chosen employees would then be printed on a separate roster and used to check off their names as they appeared to take the survey.

We recommend that the same procedures be used as in the current survey. Employees would be handed a copy of the survey, the EEO classification would be entered on the form and a short explanation would be given by the Commission representative. The employee would then take the form to one of the tables, fill out the survey form and deposit in the box provided.

Analysis of Results

The analysis of the results is a fairly straightforward process and it could replicate the analysis done for the current survey. The programs and the methodology used in the current analysis could be used for the samples. For purposes of updating the results, the analysis could be confined to the percentage of persons considered disabled in the casino plus some results according to EEO classification.

The Frequency of Updating

We recommend that the updating of the survey results be done once each year. In the case of some casinos, this survey could be done at the same time the casino surveys its employees for other purposes. Conducting the surveys once a year is frequent enough so that employees would remember the last survey and pre-survey publicity would not have to start from scratch. The time interval between surveys would be short enough so that the casino managers would remember the procedures used and would not have to reinvent them.

At the same time, the interval between surveys would be long enough so that if there were

meaningful personnel policy changes affecting the employment of persons with disabilities, there would have been time for the changes to produce effects. Timing the surveys more frequently than once each year would seem to impose burdens and costs on the casinos that would be difficult to justify. Conducting the surveys once every two years might be considered, but some of the momentum might be lost and the time intervals might be too great with insufficient feedback to casinos that instituted changes in policies.

So long as an administration date identifier is included when the survey forms are machine-read, the data could be combined and analyzed to reveal disability trends over time.

A Concluding Word

Disability is inherently a difficult condition to identify, survey and measure. It may seem like a lot of work to go through the procedures described here just to arrive at the number of persons employed at the casinos who are disabled. We do not know of any way to do it in a simpler fashion. We are convinced that observation will not do it and that keeping track of hires and exits is not feasible. We recognize that in the best of worlds, it would be good to have disability statistics to match data on gender and race and to have these data produced at monthly or quarterly intervals. We do not believe that it is realistic to produce reliable disability statistics at these intervals.

Producing reliable data on an annual basis gives individual casinos a target to aim for and to guide their disability outreach and employment programs. Each casino knows where it stands in relation to all others based on the results of the current survey. Each casino ought to be encouraged to examine its hiring and personnel policies and to exercise initiative and ingenuity in increasing the opportunities for persons with disabilities. At the end of the year it can evaluate its programs in light of the results and make changes accordingly.

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Table 8.1
Comparing Casino Employment of Disabled Persons
with Atlantic County and the State of New Jersey

	Atlantic City Casinos	State of New Jersey	Atlantic County
% Of Population Ages			
18-64 Who Are Disabled	8.20%	7.50%	9.20%
% of Labor Force			
Who Are Disabled	8.20%	4.63%	4.89%

Our principal finding is that 8.2 percent to 12.3 percent of the persons working at the Atlantic City casinos are disabled. That finding stems from our survey in which about three quarters of the nearly 45,000 employees at the casinos took the time to fill out a survey form that asked about their medical conditions, their activity limitations and their demographic characteristics.

The Casino Control Commission has asked us to compare the percentages at the casinos with the percentage of persons who are disabled in the broader population. The most appropriate comparison would be with the labor pool from which recruits are drawn. For certain purposes and for particular jobs, the labor pool from which the casinos draw is worldwide, but realism compels a narrower focus. In Table 8.1 we compare the casino percentages with those in New Jersey as a whole and in Atlantic County. The data are from the Bureau's New Jersey Demographics of Disability survey where the definitions of disability are comparable, if not identical, to those used in the casino survey.

Since all persons in the casino survey are working, the most apt comparison is with the **labor force** in Atlantic County and in New Jersey. The labor force consists of both persons who are employed for pay or profit, i.e., those who are working or on short-term layoff, and also persons who are looking for work. By definition, the labor force excludes persons who are at school, retired, too disabled to work or who are not looking for jobs for other reasons.⁷

In the report, we have used the range of 8.2 percent to 12.3 percent as the percentage of persons with disabilities working at the casinos. In most sections of the report, we use the more conservative lower figure of 8.2 percent. Recall that the higher figure includes those persons who report, not that they were limited in their current jobs, but that they were limited in their choice of jobs or that they felt that their supervisors would consider them to be disabled. Based on these comparisons, the conclusion must be that the percentage of disabled persons employed at the Atlantic City casinos compares favorably with the percentage of persons in the labor pool, no matter how that pool is determined. The Atlantic County population percentages are one percentage point higher, but this is well within the possible sampling error.

⁷The one possible reason for saying that this is not the appropriate comparison group is the notion that the so-called "discouraged workers" are not included in the labor force and yet they may be persons who would be attracted to casino jobs if they were perceived as being attractive enough. In testimony before the Commission, summarized in the Opinion of the Appellate Court (p. 10), a representative of the Rutgers University Bureau of Economic Research suggested the appropriate comparison was with the labor force figure adjusted by two percentage points to account for the discouraged worker factor. Returning discouraged disabled workers to the labor force could, therefore, be expected to increase the pool of potential disabled employees to 6.89 percent in Atlantic County and 6.63 percent in New Jersey as a whole.

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We view the results of the casino survey as being dispositive of the question and the issue raised about numbers of persons with disabilities employed at the New Jersey casinos. Certainly the findings should advance the level of discussion beyond the conjectures and guesses set forth as part of the arguments in the last court case. At that time, advocates, perhaps to bolster their position before the court, stated that only 165 disabled persons were employed at the casinos.

Of course, it can be argued that the numbers are correct but the definitions wrong. The criticism is that we include many persons with non-life threatening conditions such as low back pain who should not be counted among the ranks of the disabled.

Our defense to such a criticism is a strong one. We count persons as disabled if they report they have a medical condition that interferes with their work. Such a definition is consistent with the definitions adopted in the national surveys such as the Census and the National Institutes of Health. Newspaper reports about the number of disabled persons in the nation come from surveys that use one variation or another of the definition adopted here. The World Health Organization is in the throes of revising its classification system but its essential definition of disability is not far from the definition adopted here. Our definition necessarily has to be succinct and brief. In order to conduct a survey, operating under tight time constraints, we had to be content with simple language that could be understood by a population with a wide range of educational levels.

The point about the definitions we used being similar to those used in national and state surveys is more than an academic consideration. It is possible to change the definition when re-surveys are undertaken. It should be possible to redefine the category of disability to include only those persons in wheelchairs, persons totally blind or persons with other specified indicia of disability. There is nothing inherently wrong or incorrect about such a definition, the problem is that it would be idiosyncratic and that it would be difficult to compare the numbers with the results of any other survey.

The similarity in the data from this survey when compared to national and state surveys gives us confidence in our results. The results can be examined in detail and not only in terms of the overall percent-

ages. When we do so, we renew our confidence in the results. The relationships between age and disability is as shown in other surveys that have been undertaken. Our results show the expected age gradient with disability increasing as age increases.

In similar fashion, our survey results reveal the expected relationship between disability and education. For most educational levels, disability rates decline as levels of education increase. The relationship breaks down in the oldest age groups, possible because persons with impairments tend to drop out of the labor force and take advantage of their retirement options. The general relationship, however, stems from the diminished opportunities a person with disabilities has to take advantage of educational opportunities, as well as the narrower choice of jobs available to a person with an impairment.

We have sufficient evidence from the survey to indicate that the casinos, taken as a whole, employ persons with disabilities in at least the same proportion as exists in the labor pool from which they draw their personnel. We believe that the findings are sufficiently strong and reliable so as to put to bed the questions of the overall number. But that is hardly the end of the issues surrounding the employment of persons with disabilities at the casinos. A number of issues remain.

These issues are:

1. ***We can always do better, but striving to increase the number of persons with disabilities employed at the casinos raises some issues that must be taken into consideration. In striving to improve employment of persons with disabilities, we must be ever cognizant of the "laws of unintended consequences."***
2. ***Public policy favors the employment of persons with disabilities but frowns on quotas. Given the wealth of information in this survey about individual casinos, we can compare one casino's performance with another. If this is done in a clinical, non-threatening way, we could increase the employment of persons with disabilities. If all casinos employed the same percentage of persons***

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with disabilities as does the best, the total employment of persons with disabilities would increase by nearly three percent.

3. We obviously need to know more than we do about the employment policies of the casinos. Are there differences in the recruiting, selection, hiring and placement policies of the individual casinos? Are such differences reflected in their differential percentages in the employment of persons with disabilities? If not, what factors do account for these differences that persist even after we standardize for differences in age and education?

In a sense, the survey of employees is only one-half of the complete picture. It is one side of the equation and should be balanced with an intensive look at the individual casinos' employment policies.

We take up each of these issues beginning with the warning flags surrounding the issues of urging the casinos to employ more persons with disabilities.

A Cautionary Note

Our concept of disability is a broad one and includes persons with bad backs, asthma and cumulative trauma disorders, as well as persons with spinal cord injuries. It is one thing to urge the casinos to hire persons with tetraplegia, but it may another to encourage more bad backs, respiratory conditions or cumulative trauma disorders. One way to do this is to hire more persons with these characteristics, but surely another way is to create them from current personnel. The last thing in the world we want to encourage is neglect of safety and health procedures and poor disability management practices. This would be a horrible example of the *law of unintended consequences*.

We are not suggesting that casino managers would adopt a policy of deliberately encouraging unsafe working conditions. But the Casino Control Commission had best be aware of all of the implications of any recommended course of action. Although these matters may fall outside the ambit of the

Commission's authority, there ought to be ways of pointing out to the casinos the benefits of an enlightened policy of disability management as part of the drive to increase employment opportunities. We use "disability management" as a generic term to include safety and health programs, wellness programs as well as programs designed to minimize the sequelae of accidents and illnesses whether these occur off the job or on the job.

The complications of disability policy are never-ending. We are recommending policies designed to reduce the number of persons with disabilities even as we search for policies that increase the number. Some of the contradictions vanish on closer examination. Optimal disability management policy seeks to minimize the impact of a disabling condition, but it does not seek the ouster of the employee from the work force. Its emphasis on accommodation, alternative work and transition to work programs for persons who have been ill or injured emphasizes such a policy of retention.

Comparing Casinos

Our second point has to do with the fact that public policy favors the employment of persons with disabilities even as it frowns on some quota system. One way to deal with these issues is to compare casinos and raise the question about what the "best" casino is doing as opposed to what the lower-ranking casinos are doing. The scale here is simply the percentage of persons in the casino's labor force who are classified as disabled after adjustments have been made for all other factors including education and age.

To the extent that our statistical techniques allow, we can isolate the independent effect of being employed at the casino on the number of persons with disabilities who are in the casino's labor force. We would recommend that the Commission encourage the human resource and the EEO officers at the casinos to consult with each other to identify best practices so that the lower-rated casinos can catch up with the others.

Surveying Human Resource Practices

Such consultations may not be enough. It should be possible to go further and to investigate the personnel practices at the casinos and to identify effective policies and to tie these in with the hiring and retention of persons with disabilities.

In a sense, our survey of employees at the casinos tells half of the story. We now have information about the supply side of the equation, but not about the equally important demand side. We are presented here with an opportunity to complete the picture and to investigate the personnel policies of the casinos to determine if we can find relevant differences in what they are doing and to see if these differences can be correlated with the results from the survey.

We recommend that the Commission conduct such a survey to include a variety of topics ranging from recruitment to promotion policies. In addition, it would be useful to analyze each casino's actions in regard to the Americans with Disabilities Act and similar legislation. Such an audit would include an examination of a wide variety of items such as job descriptions, whether the casino has conducted sensitivity training sessions, the location of their testing sites and a variety of such matters. It should also cover generic personnel policies and not be confined to those concerned with the hiring of persons with disabilities, although the emphasis would be in this area.

Conference

Publication of this report comes after a long series of actions by the Commission and the various interest groups culminating in a complicated court case with a decision that led to this survey and report. By its very nature this report is bound to be controversial and subject to different interpretations by representatives of the several interest groups concerned with the employment of persons with disabilities.

Such controversies may be fine and productive so long as they lead us down the path toward the goal of maximizing the number of persons with disabilities who are employed at the casinos in good jobs and in a

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safe and healthful working environment. If, on the other hand the controversies revolve around arguments about methodology and definitions, the results may be self-defeating. One possible way to eliminate misunderstandings and to bring home some of the essential messages of the report, would be to hold a conference at which issues can be raised, questions addressed and answers given.

We recommend that the Commission sponsor such a one-day conference where the Commission can explain the reasons for the report, where the conclusions of the report can be highlighted and where an opportunity would be given for prepared remarks on the report from the casinos and the interest groups. Such a conference would take a good deal of planning and a great deal of thought would have to be given to format, choice of speakers and the choice of invitees. The payoff, however, could be great and the conference could produce materials that would be an essential part of a wider dissemination effort.

If such a conference were successful, the Commission might consider the advisability of a second conference - a national conference featuring the survey. The target audience would be national disability groups, employer groups concerned with disability issues and casinos in Las Vegas and other locations. Unlike the first conference, a registration fee might be charged those who wish to participate so that the conference could be financed without Commission funding.

As far as we are able to determine, this survey represents a pioneering effort in the field of disability. Here we have a survey of an entire industry in one location where we count the number of persons with disabilities who are working. Unlike the typical household survey where most of the persons identified as being disabled would not be employed, here we have a count of the success stories, as it were. All of the persons classified as disabled are working. They are working in a wide variety of jobs calling for different skills and talents. We know something about the medical conditions that underlie their disability as well as their demographic characteristics.

We have not had the chance in this report to

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analyze all of the wealth of information gathered in the survey. Our concentration necessarily had to be on the main questions raised. Our brief was to report on the percent of employees with disabilities in the industry in the individual casinos and in the aggregate according to EEO classifications. We have accomplished that objective, but there is much more that could be done with the data. Preparation of reports for a conference might be one way to accomplish this secondary objective. Having been the pioneer in this field, New Jersey should be in a position to reap some of the rewards of innovation at such a conference.

A Final Word

We can step back for a moment and ask the questions: What have been the results of the survey? What good might come of this effort? Our answers are along two lines.

First of all, we have advanced a concept of disability that is measurable and that yields numbers that can be compared with state and national surveys. There is a reasonable chance that such numbers can be produced on a regular basis and compared to changes in the national figures or possibly with state and local surveys should these be undertaken in the future. Surely as important is the finding that these numbers can be compared within the industry. Using the equations derived in the report, we can compare one casino with another in the drive to meet the objectives set forth in public policy. Using these data we can move towards the goal of improving the employment chances of persons with disabilities.

In addition to satisfying the immediate goals of the survey, we have a plethora of data on casino employees. The information accumulated should prove useful, not only for general EEO purposes, but to aid in recruitment and to improve our understanding of the gaming industry's labor force. As the information is updated in the successive sample surveys, we can shed a good deal of light on the effect of the industry's changing mix of games and locations on its demands for different types of personnel.

Once the purposes of this survey were made clear to the individual casinos, the industry responded with enthusiasm as attested to by the phenomenal response and participation rates. The challenge now is to disseminate the results of the survey and to encourage discussion of the results so that they will be understood. As with the initial survey, we are confident that once the issues are explained, we will have the same degree of enthusiastic response.

